SPEED TABLE

TIME PER MILE	MILES PER HOUR	TIME PER MILE	MILES PER HOUR
41″	87.8	1′11″	50.7
42″	85.7	1′12″	50
43″	83.7	1′13″	49.3
44″	81.8	1′14″	48.6
45″	80	1′15″	48
46″	78.3	1′16″	47.4
47″	76.6	1′17″	46.8
48″	75	1′18″	46.2
49″	73.5	1′19″	45.6
50″	72	1′20″	45
51″	70.6	1′25″	42.4
52″	69.2	1′30″	40
53″	67.9	1′35″	37.9
54″	66.7	1′40″	36
55″	65.6	1′45″	34.3
56″	64.3	1′50″	32.7
57″	63.2	1′55″	31.3
58″	62.1	2′00″	30
59″	61	2′15″	26.7
1′00″	60	2′30″	24
1′01″	59	2′45″	21.8
1′02″	58.1	3′00″	20
1′03″	57.1	3′30″	17.1
1′04″	56.2	4′00″	15
1′05″	55.4	5′00″	12
1′06″	54.5	6′00″	10
1′07″	53.7	7′00″	8.6
1′08″	52.9	7′30″	8
1′09″	52.2	8′00″	7.5
1′10″	51.4	10′00″	6

O K

SOUTHERN PACIFIC COMPANY

WESTERN DIVISION SPECIAL INSTRUCTIONS

No. 3

EFFECTIVE JANUARY 1, 1969
AT 12:01 A.M.,
PACIFIC STANDARD TIME

THESE INSTRUCTIONS CONSTITUTE A PART OF THE TIMETABLE CURRENTLY IN EFFECT.

M. A. McINTYRE,
General Manager.

S. B. BURTON,
R. L. KING,
Assistant General Managers.

J. J. WILLIS,
General Superintendent of Transportation.

O. D. GOODWILL,
Superintendent of Transportation.

W. M. JONES,
Superintendent.

RULE A. Employes must have copy of Rules and Regulations of the Transportation Department effective January 1, 1969.

There are numerous structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

See list of impaired clearances on main track and siding in sub-divisions.

RULE 7-B. Switchmen must use green flag by day and green light by night in giving proceed signals for movement of trains and engines entering or leaving yard tracks and for movement of engines on engine tracks San Francisco, Bayshore, San Jose, Watsonville Jct., San Luis Obispo, and Oakland, except trains departing in either direction from main tracks 1 and 2 will be governed by signal indication.

RULE 10-H and RULE 15. On all branch lines except Schellville Branch, yellow flags will be displayed one-half mile instead of two miles from point of restriction and when a torpedo is exploded in the vicinity of a yellow flag in accordance with Rule 10-H, the train must proceed expecting to find an unattended red flag that may be displayed one-half mile beyond the torpedo and yellow signal.

RULES 10-G, 10-H and 10-I. When unattended red flags or red lights, yellow signals, red CONDITIONAL STOP signs and yellow PROCEED PREPARED TO STOP signs are displayed between siding switches, they must be duplicated to the right of the siding in direction of approach. If clearance between siding and main track does not permit display of these signals to the right of track in direction of approach, signals may be displayed to the left of the track. Display of these signals to the left of track direction of approach must be respected as though they were displayed in accordance with these rules.

RULE 10-J. Speed signs prescribing an increase in speed will not be installed on branches. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

RULE 26. On diesel fueling tracks at West Oakland diesel shop, Tracy diesel track, Third St. Station, San Francisco, San Jose passenger station and Watsonville Jct. a blue light will not be attached to reflectorized blue "Men at Work" signs when displayed at night.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction.

RULE 84. Passenger trains making station stop where rear end of train cannot be seen from the head end due to curvature of track, foggy or stormy weather, engineer will recall flagman from the rear as prescribed by Rule 14(d) or 14(e), as the case may be. When all passengers on rear of train have been loaded, flagman will sound signal 16(k) which will be answered by the engineer with signal 14(g). Train will not proceed until signal is given by trainman on head end of train.

RULE 98. Cars must not be kicked, dropped or shoved over railroad crossings not protected by interlocking, unless movement is protected.

RULE 105. Sidings designated "E" in Capacity of Sidings column are assigned for use by eastward trains; those designated "W" are assigned for use by westward trains. Those designated "M" for middle, may be used by trains in either direction. Those designated "N," "S," "1," "2" or "3" are assigned for use by trains as shown in special instructions for the subdivision on which located.

Capacity of Sidings column indicates the distance in feet between fouling points.

RULE 107. Freight trains and engines must avoid passing between stations and loading tracks when passenger trains are closely approaching from opposite direction on double track, and care must be exercised by non-stopping passenger trains when approaching stations at about the same time that other passenger trains are approaching from the opposite direction. When practicable non-stopping trains are to be given preference, but each train must be operated in a manner to avoid confusion and hazard of personal injury.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

PUSH BUTTONS

Where signal protection is provided for movements from an adjacent track to main track, push buttons and pilot lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass Approach Circuit sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Further instructions posted inside push-button box.

ELECTRIC OR MECHANICAL SWITCH LOCKS

Be governed by instructions posted in telephone booths, in doors or on housings of Electric or Mechanical Switch Locks.

RULE 605. INTERLOCKING

Trains and engines must not enter main track within interlocking limits where no signal governs such movement until permission has been obtained from operator, and must then run with caution not exceeding 12 MPH to the next signal.

At all interlockings, when route lined is not to be used, following engine whistle signal will be sounded: o o — o o.

RULE 663(b). (INTERLOCKING)

Operator at

TRACY
FRUITVALE
NILES
NEWARK
SAN JOSE
MARTINEZ
DAVIS
BAYSHORE

Operator (or dispatcher where applicable) may authorize movements under provisions of this rule after it has been ascertained indication lights on control panel are illuminated indicating dual control switches are in proper position and locked for movement without requiring dual control switches to be placed in hand position as required by Rule 772.

When indication lights on control panel are not illuminated movements may be authorized under provisions of this rule; however, before making a facing point or trailing point movement over dual control switches, such switches must be placed in hand position in accordance with Rule 772 and locked until movement over switch has been completed. When movement has been completed, switch must be returned to normal position and selector lever restored to motor position and locked.

RULE 705. HOT BOX DETECTORS

Instructions follow for operation of hot box detector boxes when stopped by illuminated letter or flashing white light actuated by hot box detector device. These instructions are also posted inside detector boxes.

Hot box detector scanner sites have a white light continuously displayed on track side of instrument house, except when a hot bearing is detected, at which time light will start flashing. Crew members must keep a vigilant lookout for light and, when flashing, conductor and engineer must immediately orally compare observation when means of communication is available. Absence of white light must be promptly reported to Train Dispatcher.

When letter "H" is illuminated or it is known a hot bearing has been detected by crew member observing the flashing white light at scanner site, speed of train must be reduced to not exceeding 15 MPH until stop is made at location of readout indicator.

When letter "W" is illuminated train must stop and wait until indicator is extinguished or permission is obtained from train dispatcher to proceed. Telephone located near "W" indicator

Numerals displayed by indicator inside of box indicate location of car with hot bearing in train. Top row indicates hot bearing on right side of train and lower row on left side of train in direction of movement. Numbers displayed on top row or bottom row indicate number of axles between hot bearing and rear of train. Indicator will display a maximum of four hot bearings on each side of train. All journals of car indicated by detector as well as each adjoining car must be inspected.

When H indicator indicates a hot journal on train and there is no count on hot bearing detector and red light below readout marked "Locator out of Service" is illuminated, all journals on train must be inspected.

After inspection has been completed train dispatcher must be notified of condition found. When it is safe to proceed, member of crew must push button below indicator panel to cancel numbers on the indicator. Case door must be closed and secured with switch lock.

When hot box detectors actuated, following information is to be reported at next terminal in telegraph message form addressed jointly to Superintendent, Division Engineer, Signal Supervisor, Chief Dispatcher and Master Mechanic identified by symbol H.B.

1. Date and time stopped, and M.P. location.
2. Train identification.
3. Car number and location in train.
4. Box location (1, 2, 3 or 4 from trailing end of car in direction of movement, right or left side).
5. Disposition of car. (If set out, state where. If inspection shows that it was not necessary to set out even though journal was warm enough to activate the detector, advise what corrective action was taken to permit movement of car. If roller bearing equipped, so state.)
6. Report all cases where train passes over the detector without an indication having been displayed, but developing a hot box between detector and a point 20 miles beyond detector.

CENTRALIZED TRAFFIC CONTROL

RULE 781. White light which may appear on side of relay housing is maintainer's call light, but when train has been stopped by an absolute signal and white light is observed burning, members of crew will communicate with train dispatcher, even though another train may be seen approaching.

GENERAL REGULATIONS

RULE 825. A sufficient number of hand brakes must be set to hold cars; if two cars or more, not less than two (2) must be set.

Rail skids are hung on posts at locations listed under sub-divisions. When using rail skid it must be placed on rail and leading wheel of first car in descending direction run onto rail skid and hand brakes set if brakes are operative before engine is detached. Train crews picking up cars from these locations must remove rail skid and return to proper location and locked where locks are provided.

* **RULE 827.** Engines running light on descending grade without dynamic brake in operation must stop a sufficient length of time to permit wheel heat radiation if there is indication of overheating. Stop need not be made if in the judgment of engineer it is safe to proceed.

Dragging equipment detector mounted on post adjacent to detector will display revolving Red Light when detector is actuated. Crew members must keep vigilant look out when passing and if revolving red light observed, train will be stopped promptly and inspection made of train and track notifying dispatcher of condition found.

RULE 853. Passengers may be allowed to take dogs in smoking cars of commute trains provided dogs are on leashes and owners control actions of the animals so that there is no complaint from other passengers.

When the DEL MONTE is operating without a baggage car passengers may be allowed to take dogs in coaches when carried in baskets or containers.

RULE 872. Enginemen taking charge of road engines at West Oakland, Tracy, 7th Street Diesel Terminal, Bayshore, San Jose, Watsonville Junction and San Luis Obispo, will consider engines as having been amply supplied with water, fuel, sand and other supplies, prescribed signals, tools and flagging equipment in serviceable condition.

RULE 883. Light engines must not be left unattended on grades unless protected in descending direction by derail or spur track switch lined for diverging track. Air brake must be applied and hand brake on each unit of consist must be applied.

AIR BRAKE RULES

FREIGHT TRAINS

RULE 2-B. Dynamic brake on head end of freight and mixed trains must not exceed three 8-axle units, four 6-axle units, six 4-axle units, or any combination thereof which totals 24 axles, except dynamic brake on EF415A, EP415A, EF415B, and EP415B classes is limited to five units.

Dynamic brake must not be used when operating in multiple with engines other than SP or SSW units unless equipped with dynamic brake interlock.

RULE 2-C. Enginemen must assure themselves that safety control valve (deadman control) is fully cut in when handling cars with train brakes cut in.

RULE 3. A full independent brake application on road locomotive classes EP636, GF628, EF630, EF636, EF850B GS630 and EF623 results in a brake cylinder pressure of 72 psi. This brake cylinder pressure must be maintained to provide required braking power at very low speeds or when stopped. Under no circumstances must self-lapping portion of independent brake valve be changed except to obtain brake cylinder pressure of 72 psi from a full independent brake application.

RULE 11. Cars equipped with brake cylinder release valve may have one or two operating release rods. Operating rods connected to brake cylinder release valve may be identified by stencil reading—"Br. Cyl. Rel." or by a diamond shaped stencil or by noting that ends of release rod form a small closed circle. Air brakes can be released on cars equipped with brake cylinder release valve by a hard momentary pull on release rod after brake pipe pressure has been depleted.

RULE 17. If at any time in engineer's judgment retaining valves are required on any train, stop will be made and retaining valves turned up in accordance with his directions.

RULE 22. Trainmen must not couple air hose on outgoing trains at Ozol, Tracy and San Luis Obispo until train is made up and caboose and road engine are on train. Coupling caboose and road engine to train will be considered as an indication that train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the road engine and caboose have been attached without instructions from the yardmaster, who will see that members of the crew are notified in advance.

RULE 23. The following series of cars are equipped with AB brake system which has automatic changeover feature to provide proper brake function when car is loaded and when empty:

SSW	75700 — 75799	Gondolas
SSW	78500 — 78599	Hoppers (Open Top)
SP	333500 — 334399	Gondolas
SP	337500 — 337599	Gondolas
SP	345000 — 345669	Gondolas
SP	354000 — 354399	Gondolas
SP	463500 — 463999	Hoppers (Open Top)
SP	467500 — 467549	Hoppers (Open Top)
SP	480000 — 480193	Hoppers (Open Top)
SP	491000 — 491059	Hoppers (Covered)
SP	492000 — 492039	Hoppers (Covered)
SP	500604	Flat Car
SP	590000 — 590099	Flat Cars

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

RULE 24-B. San Luis Obispo, Watsonville Jct., San Jose, Oakland, Davis and Tracy. Incoming engineer, after completing stop, must make a full service brake application leaving brakes applied. When outgoing crew takes charge of train on arrival or otherwise is assured, upon request, that continuity of brake pipe has not been disturbed, engineer will release brakes and proceed.

RULE 38-A. Will not apply at Sacramento except incoming engineer after completing stop will make a full service brake application, leaving brakes applied. Running test in compliance with Rule 39 must be made as soon as speed permits after train departs terminal.

MISCELLANEOUS

1. Helper Service:

(a) When helper engine is placed behind caboose, not more than 2 operating units or 4000 operative horsepower will be used.

(b) When helper engine is placed immediately ahead of caboose a combination of not more than 18 axles will be used.

(c) Helper engines consisting of more than 12 axles must not be placed directly behind 80 foot or longer trailer flatcars.

(d) When helper engine is placed directly ahead of caboose, additional helper must not be coupled behind caboose. Helper engines must be separated by at least 20 cars.

(e) Air will be cut in on all helper engines, and engine must not be coupled or uncoupled while train is in motion.

(f) When helper engine is shoving on ascending grade, throttle must be reduced as train speed reduces, then throttle regulated so that amperage will be approximately the same as indicated before train speed reduction.

2. Unless otherwise authorized, trains handling passenger cars with flat spots on wheels in excess of 3¼ inches in length must not exceed 10 MPH. When flat spots are not in excess of 3¼ inches long such cars may be operated at maximum authorized speeds.

3. On departure from locomotive maintenance facility, enginemen must determine by making running brake test the independent and automatic brakes are operating effectively.

4. F and P class engines operated with engineer in other than the lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossings at grade, subject to further restrictions imposed by local conditions.

5. **SPEED RESTRICTIONS FOR ENGINES AND TABLE OF COMPARISON:** Maximum speed shown in the table on the following page is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains.

Engines handled dead must not exceed speed shown in table.

MAXIMUM SPEED FOR ENGINES—LENGTH OF DIESEL UNITS

(Between Pulling Face of Couplers)

CLASSIFICATION	MAXIMUM SPEED EXCEPT (#)	LENGTH (Feet)
AF420-1	70	58
AF624C-1	75	67
AF624-1	70	67
AF628-1, 2	70	70
AF630-1	70	70
AF640-1	70	60
EF415C-1	70	56
EF415A-4 to 9, 11	70	51
EF415AC-1, 2, 3	70	51
EF415BC-1, 2, 3	70	50
EF415B-2 to 7, 9, 11, 13	70	50
EF418A-1	70	51
EF418B-1	70	50
EF418-1 to 9	70	57
EF418C-1, 2	70	57
EF618-1 to 5	70	61
EF420C-1	75	57
EF420C-1, 2	70	57
EF420-1, 2	70	57
EF423C-1	70	57
EF423-1	70	57
EF425C-1, 2, 3	70	57
EF425-1, 2, 3, 4	70	57
EF625-1	70	61
EF430C-1	70	60
EF630-1, 2	70	66
EF636-1, 2, 3	70	66
EF636C-1	70	66
EF850B-1	70	88
GF425-1, 2, 3	70	61
GF428-1	70	61
GF628-1	70	68
GF630-1	70	68
GF850-1	70	84
KF636A-1	70	66
KF636-1	70	68
EF623-1	70	66
EP415A-1 to 5	79	51
EP415AC-1	70	55
EP415B-1, 2, 3	79	50
EP418-1 to 4	79	57
EP418-5	70	57
EP620B-1, 2	79	70
EP620A-2	79	72
EP624A-1	79	71
EP636-1	70	71
FP624-1, 2	70	66
AS407-1	60	45
AS409-1 to 5	60	46
AS410-1 to 6	60	46
AS415-1	65	54
AS416C-1, 2, 3	75	57
AS416C-4, 5	65	57
AS616-1 to 5	65	57
AS616C-1	65	57
AS418-1 to 6	70	57
AS618-1	70	59
BS410-2, 4	60	49
BS412-1 to 4	60	46
BS615B-1	35*	58
BS615-2 to 5	35*	58
BS616-1 to 6	35*	58
ES406-2, 3	45	45
ES408-1 to 4	65	45
ES408B-1	65	45
ES409-1, 2	65	45
ES410C-1, 2	65	45
ES410-1	60	45
ES410-2	65	45
ES412C-1 to 5	65	45
ES412-1 to 5	65	45
ES415-1, 2	65	45
ES415C-1	65	45
ES615-1, 3	55	61
ES615-1 to 4	70	61
FS412-1 to 5	60	50
GS407-1, 6	55	37
RDC	79	87
Any locomotive not listed	35	—

#When operated in multiple unit control, on headend of train or running light and engineer is in other than the leading control cab in direction of movement, speed must not exceed 30 mph. 'A' type units (indicated by letter 'A' following classification numerals) operating in reverse as lead unit in direction of movement must not exceed 30 mph.

*Speed must not exceed 25 mph on less than 90-lb. rail.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

Maximum speed of trains handling dead diesel engines must not exceed the speed shown for same engine running forward light.

Dead diesel engines hauled in train and weighing 100,000 pounds or more must be placed first behind engine handling the train. If weight is less than 100,000 pounds dead diesel engines must be placed near rear of train.

Dead or disabled engines, which require movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine is to be moved and location in train in which it is to be placed. Any such engine must not be handled in train until train order designating maximum speed is issued.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

SNRY engines will not exceed speed restrictions for engines shown in SNRY timetable and maximum speed is subject to further restrictions applicable to certain territories as shown in speed restrictions for trains.

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or triple loads	..	25
Scale test cars	40	30
except SPMW-2024	65	49
Steel pile drivers, except:	40*	30*
SPMW 4088 and 5479 (locomotive crane pile drivers)	45*	35*
Relief outfits with steam derrick, except:	45*	25*
Nos. 7000 and 7010 on San Ramon Branch	..	10
Nos. 7000 and 7010 must not operate between Larkmead and Calistoga on Calistoga Branch.		
7007-7033-7034	35*	25*
Nos. 7014 and 7025 must not operate on any branch except Schellville Branch; Calistoga Branch between Napa Jct. and Napa River bridge 69.62 at Napa; and on Vallejo Branch between Napa Jct. and MP 68.40.		
Vasona Branch and between Castroville and Monterey.		
Locomotive cranes:		
With boom disconnected, heavy end forward, except SPMW-4020, 743 and 4049.	45 35*	25* 25*
With boom disconnected, light end forward	20*	15
With boom in place, either end forward	25*	15

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed signs.

SPMW 4088, Crane Pile Driver restricted to 45 MPH and must be placed on rear of train.
SPMW 5479, 5499 and 5497 are restricted to 45 MPH.

OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Trains of deadhead equipment, with caboose	65	..
Passenger trains, with caboose	65	..
Engine and caboose only, except:	..	65
must not exceed speed for same engine running forward light.		
Logs loaded on flat or logging cars, except:	..	35
On curves	..	25
Through truss bridges, tunnels and passing stations	..	15
Engine, flanger and caboose only, except:	..	40
On curves	..	30

All cars handled in passenger train must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

Passenger carrying cars, baggage, express and other head-end cars, unless equipped with steel center sills and steel platforms must not be handled in passenger trains except on authority of Superintendent.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them.

Where mail, papers, or ice are to be dispatched from passenger trains at points where train does not stop, slow down sufficiently to permit safe dispatch without hazard, and stop at such stations for this purpose if train is moving on adjoining track between passenger train and point of exchange.

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains and light engines must not exceed 59 MPH, and speed of freight trains must not exceed 49 MPH, nor may speed exceed that applying to normal operation.

By Decision No. 74486 dated August 6, 1968, California Public Utilities Commission's General Order 26-D revised as follows.

2.5 If freight cars of a height greater than fifteen (15) feet six (6) inches are transported or proposed to be transported, minimum overhead clearances shall be increased by an amount of not less than such additional height provided that box or other house cars sixteen (16) feet ten (10) inches or more in height are exempt from this subsection when the top running boards have been removed, ladders and hand brakes lowered, cars painted, stenciled, and otherwise modified in compliance with the provisions of Section 131.24 of Part 131, U.S. Safety Appliance Standards (Railroad), and provided that if train length permits any such cars. Shall be trained at least five (5) cars distant from caboose.

7.4 All open top cars with lading extending laterally in excess of five (5) feet five (5) inches from centerline of car shall if train length permits be trained at least five (5) cars distant from both the caboose and the engine.

7.8 Cars on which the lading exceeds fifteen (15) feet six (6) inches above top of rail if otherwise in compliance with these requirements as to width of lading and the nature of which precludes the probability of employees getting on top of or passing over them are exempt from the conditions of this section, provided, however, that if train length permits, any such cars except cars transporting highway trucks or trailers, multi-level freight cars either loaded or unloaded, and automobile underframe cars, shall be trained at least five (5) cars distant from caboose. For the purpose of this Section, automobile underframe cars are either special flat cars upon which automobile under frames are stacked and firmly secured in a horizontal position or gondola cars in which such underframes are placed on end and firmly secured to said gondola cars.

RULES 10-H and 10-J. Between San Francisco and San Jose, speed signs may be displayed on a post below a yellow signal to indicate the maximum speed permitted two miles beyond the yellow signal. The number on such speed signs applies to all trains and should indicate the same speed as that designated by train order or timetable bulletin.

When speed signs are so displayed and the maximum speed indicated by the speed sign is in excess of that permitted by train order or timetable bulletin be governed by the train order or timetable bulletin. In the absence of such speed signs be governed by the speed designated in the train order, timetable bulletin or by Rule 10-H.

A green metal sign at the limit of the restriction will be displayed in accordance with Rule 10-H.

RULE 10-J. Westward speed sign reading 60-40 at MP 9.10 located on signal bridge one mile instead of three-fourths mile from restriction.

Westward speed sign at MP 45.86 reading 60-55 is to right of track with two tracks intervening.

Westward speed sign at MP 93.90 reading "Spring Switch 25" is 0.93 mile instead of three-fourths mile from restriction.

Speed signs to left of track:

Westward	Reading
MP 45.91	25
MP 92.97	35

RULE 14(l). Trains approaching Logan between 6:00 AM and 3:00 PM must sound whistle to warn carmen who may be working next to main track.

RULE 14(m). That portion requiring whistle to be sounded one mile before reaching stations will not apply between San Francisco and San Jose.

RULE 21. Train indicators will be used on commute trains operating between San Francisco and San Jose when engines are so equipped. These trains must not leave their initial station until train number is displayed. Enginemen must not put up, take down nor change indicators while engine is in motion.

Engines of passenger trains may display indicator between Seventh St. engine storage track and Third St. station, San Francisco; and from San Jose passenger station to roundhouse but must be removed immediately on arrival at roundhouse.

RULE 26. At Third St. Station, San Francisco, and at San Jose passenger station, blue sign may be displayed on either side of engine cab.

RULE 26-A. Watsonville Jct.: Indicator lights above each end of tracks leading to Union Ice Co. dock governing movements on those tracks as follows:

Green:	Tracks may be used for train or switching movements.
Yellow:	Tracks may be entered and engines, cars or cabooses added or detached.
Red:	Tracks may be entered but cars on tracks must not be coupled to or moved. Trains made up on these tracks must not depart until it has been ascertained indicator displays green aspect.
Not Lighted:	Must be considered as displaying most restrictive indication and icing platform foreman must be contacted for instructions before cars are coupled to or moved.

RULE 82-A. Trains originating Sunnyvale must obtain a clearance before departing, when operator on duty.

Freight trains turning at Redwood Jct. must obtain clearance before leaving Redwood Jct.

Westward extra trains originating San Jose Yard will obtain clearance at Santa Clara.

Trains destined San Jose Yard need not obtain clearance at San Jose.

Westward trains originating San Jose Yard departing via Milpitas Line will obtain clearance at College Park Tower.

Westward trains, except those having received clearance at San Jose or College Park Tower, must obtain clearance at Santa Clara.

Nos. 98, 126 and 374 must obtain clearance at San Jose.

RULE 83. Identification may be made at San Jose, or between Lick and Coyote; Corporal and Gilroy; to be applied at end of double track. Trains approaching each other between these stations must reduce speed sufficiently to permit identification, and Rule 14(k) will apply.

RULE 83A. At the following stations only the trains indicated will register:

Bayshore	Trains originating or terminating
Sunnyvale	
Redwood City	
San Jose Yard	Trains originating or terminating San Jose Yard
San Jose	All trains except third class and extras which originate or terminate at San Jose Yard.
Gilroy	Trains originating or terminating.

RULE 83-B. At open train-order offices, trains may register by ticket as follows:

Bayshore	Trains originating or terminating.
Redwood Jct.	Trains to or from Niles Subdivision.
Santa Clara	No. 373 and trains terminating at San Jose Yard.
San Jose	Nos. 98, 126, 374, 373, 141, 99, and westward trains terminating San Jose.
Watsonville Jct.	Nos. 98, 126, 374, 373, 141 and 99.

RULE 93. First class trains enter and leave San Francisco passenger station on yard tracks within Fourth St. interlocking limits.

First class trains enter and leave San Jose passenger station on yard tracks between MP 45.91 and MP 47.29.

Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
.00	San Francisco	11.48
7.39	” (San Bruno Branch)	13.64
24.44	Redwood Jct.	27.17
	” (Niles Subdivision)	28.20
43.47	San Jose	60.00
	” (Lick Branch)	End of Branch
43.74	” (Agnew line)	
44.84	” (Milpitas line)	
51.47	” (Vasona Branch)	
79.31	Gilroy	82.41
96.11	Watsonville Jct.	101.25
	” (Santa Cruz Branch)	103.60
119.30	Santa Cruz (Santa Cruz Branch)	End of Branch
	” (Davenport Branch)	End of Branch

Watsonville Jct.: Eastward freight trains, except No. 374 must not pass Signal 984 unless proceed signal received from yardman, green flag by day, green light by night.

Westward freight trains, except No. 373 must not pass Signal 1001 unless proceed signal received from yardman, green flag by day, green light by night.

RULE D-97-A. Will apply between San Francisco and San Jose; between Lick and Coyote; between Gilroy and Corporal; and between Logan and Watsonville Jct.

RULE 98. Ninth and Division Streets—San Francisco: WPRR crossing of SP tracks is not protected by interlocking. Trains and engines must stop before crossing WPRR and not proceed over crossing until it has been ascertained there are no trains or engines closely approaching the crossing from either direction. SP trains and engines have precedence over WPRR trains and engines when using this crossing.

SPECIAL INSTRUCTIONS—SAN FRANCISCO SUBDIVISION

San Jose: WPRR crossing of the SP tracks on the Vasona Branch at San Jose is not protected by automatic interlocking. Trains and engines must STOP before crossing WPRR and not proceed over crossing until it has been ascertained there are no trains or engines closely approaching the crossing from either direction. SP trains and engines have precedence over WPRR trains and engines when using this crossing.

"STOP" signs installed on WPRR and SP tracks in approach to this crossing.

Sign reading "RAILROAD CROSSING 2000 FT." is located at MP 47.4 for westward trains and sign reading: "RAILROAD CROSSING 2400 FT." is located at MP 48.6 for eastward trains.

American Can Spur at Western Pacific 5th St. Lead

All movements must be stopped short of crossing and not proceed until member of crew has ascertained that there is no approaching movement on conflicting route. Western Pacific Railroad movement has precedence.

Western Pacific Railroad Company switching lead crossing at Western Pacific-Southern Pacific Joint Drill Track, South Seventh Street, San Jose:

All movements must be stopped within 50 feet of crossing and not proceed until member of crew has ascertained that there is no approaching movement on conflicting route. Movements on Western Pacific-Southern Pacific Joint Drill have precedence.

RULE 99. Granite Rock Co. will do switching at Logan. When necessary for SP crews to enter tracks jointly operated they must provide adequate protection to avoid collision.

RULE 99-C. Will apply on Vasona and Hollister Branches.

RULE 102. Should a passenger train break-in-two, or an emergency application of brakes occur while in motion on the grade between Santa Cruz and Felton, forward brakeman will immediately go toward rear, close angle cock at opening if train has parted, set hand brakes and turn up retaining valves on detached portion. After train is coupled air must be applied from engine before hand brakes and retaining valves are released.

If necessary to leave detached portion on main track, rear truck of detached portion ascending grade, or leading truck of detached portion descending grade, must be chained to rail in such manner as to derail car should there be an uncontrolled movement.

RULE 103-A. Automatic crossing gates:

In Double Track territory—San Francisco to San Jose, Lick to Coyote, Gilroy to Corporal and Logan to Watsonville Jct. automatic crossing gates will operate for against current of traffic movements but such movements must not exceed 25 MPH approacing these crossings.

Sunnyvale—Sunnyvale Ave. May be operated for eastward movements from house track by operating key release on side of instrument case. Switch key may be removed but circuit must be occupied within one minute or gates will rise.

At the following stations there are crossings protected by gates which are not actuated when trains are stopping at station to receive or discharge traffic until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down:

Station	Location	Direction	Mile Post
★San Francisco	King St.	Eastward	0.62
★San Francisco	King St.	Westward	0.62
★San Francisco	Berry St.	Eastward	0.69
★San Francisco	Berry St.	Westward	0.69
†★So. San Francisco	Grand Ave.	Eastward	9.3
† San Bruno	Angus Ave.	Westward	11.4
★Millbrae	Millbrae Ave.	Westward	13.7
† Burlingame	Oak Grove Ave.	Westward	15.9
† Burlingame	North Lane	Westward	16.2
†★Burlingame	South Lane	Eastward	16.3
†★Burlingame	Howard Ave.	Eastward	16.4
†★San Mateo	1st Ave.	Westward	17.7
†★San Mateo	2nd Ave.	Westward	17.8
†★San Mateo	3rd Ave.	Eastward	17.9
†★San Mateo	4th Ave.	Eastward	18.0
†★San Mateo	5th Ave.	Eastward	18.1
★San Carlos	Holly St.	Westward	23.2
†★Redwood City	Broadway	Westward	25.4
†★Redwood City	Jefferson Ave.	Eastward	25.6
★Menlo Park	Ravenswood Ave.	Eastward	29.0
★Palo Alto	Palo Alto Ave.	Westward	29.8
†★Mountain View	Castro St.	Westward	35.9
†★Sunnyvale	Sunnyvale Ave.	Eastward	38.9
†★Sunnyvale	Sunnyvale Ave.	Westward	38.9
† Gilroy	7th St.	Westward	80.7

★Equipped with unit for display of flashing white light. Display of flashing white light indicates gates are down. Trains or engines approaching these crossings after making station stop, entering main track from spurs or station tracks or moving at reduced speed must not enter crossing until flashing white light is displayed or it is known gates are down.

†Sound detector microphone located adjacent to track. Trains stopped at station to receive or discharge traffic, before starting in either direction, must sound whistle to actuate gates before train enters crossing.

Locations at which trains must stop to avoid unnecessary operation at crossing gates while trains are switching or receiving and discharging traffic:

Station	Location	Direction
South San Francisco.	East of Signal 91	Westward
**Belmont	1400 ft. east of Harbor Blvd.	Westward
***San Carlos	400 ft. west of Holly St.	Eastward
†Palo Alto	150 ft. west of subway	Westward
Sunnyvale	255 ft. east of Sunnyvale Ave.	Westward

†Applies only to trains loading or unloading mail baggage and express.

**Applies to trains switching Harbor spur when necessary to leave part of train east of Harbor Blvd.

***Applies to trains switching house track when necessary to leave part of train west of Holly St.

Public Utilities Commisssion orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Millbrae—Crossing Rollins Road on tracks Nos. 15, 23 and 77.
Broderick Rd. Tracks 103 and 105.
Guittard Rd. Track 105.
David Rd. Track 15.

San Carlos—Old Country Road crossing E-23.4-C.

Before movement is made by trains or engines over crossing, a member of train crew must protect traffic on the following street crossing:

California Avenue—Park Blvd. on east leg of wye.

RULE 104. The normal position of rigid switches at junctions is as follows:

San Jose	Vasona Branch, for Gilroy line main track,
Permanente	Permanente Corp., for track No. 1.
Lick	Lick Branch, for eastward main track,
Carnadero	Hollister Branch, for westward main track,
Santa Cruz	Davenport Branch, for Santa Cruz Branch.

Derails on main track:

Olympia at MP 129.23. Derail must be left lined in derailing position when cars are stored on main track east of derail.

RULE 107. Station train indicators are provided in approach to following stations:

Eastward		Westward
South San Francisco		Santa Clara
San Bruno	San Carlos	Sunnyvale
Millbrae	Redwood City	Mountain View
Broadway	California Ave.	Hillsdale
Burlingame	Mountain View	San Bruno
San Mateo	Sunnyvale	
Hayward Park	Santa Clara	
Hillsdale	College Park	
Belmont		

When illuminated these indicators will convey the following information:

TRAIN—Train at platform on opposite track.

CLEAR—Indicator in service.

When neither TRAIN or CLEAR is illuminated, indicator is out of service and report must be made to chief train dispatcher as soon as practicable.

In the morning all eastward passenger trains will favor westward commute trains. In evening all westward passenger trains will favor eastward commute trains.

Particular care must be exercised at such stations as Bayshore, Millbrae, Hillsdale, Belmont and Santa Clara where view of station is limited in both directions, also at 23rd St., Paul Ave. and Butler Rd., where passengers may attempt to cross tracks closely behind westward trains. Under such circumstances yard drags and engines on eastward track must stop and take necessary precautions to avoid injury to patrons.

RULE D-151. San Francisco: End of double track is at King St., east limit of Fourth St. interlocking.

San Jose: End of double track is at MP 45.91, College Park at east end of crossover just west of West Taylor St. subway.

Gilroy: End of double track: Westward trains leaving end of double track from eastward main track will be governed by Signal 805.

RULE D-152. Crossovers between San Francisco and San Jose are located as follows:

West end Tunnel No. 3; MP 3.16; between Tunnels Nos. 3 and 4 San Francisco; South San Francisco; San Bruno; Millbrae; Burlingame; Belmont; San Carlos; Redwood Jct.; Menlo Park; California Ave.; Mountain View; Sunnyvale and MP 41.18.

RULE 221. Train-order offices College Park and Santa Clara are located in tower.

Redwood Jct. and Sunnyvale are train-order offices for trains originating only.

RULE D-251. Applies on both tracks between San Francisco and San Jose, except when inferior trains moving on main track are delayed in this territory, they must clear time of following first-class schedules in accordance with Rule 86 (b).

Applies between Watsonville Jct. and Logan; between Corporal and Gilroy; and between Coyote and Lick.

RULE 306. The following block signals, equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Interlocking signals are listed as "P-I" or "P-SA".

Eastward Signal	Protection	Westward Signal
P-172	Four collision detectors at Poplar, Santa Inez, Mt. Diablo and Tilton Ave., underpasses, San Mateo	P-179
	Spring switch, Milpitas wye, San Jose........	P-I
	Spring switch, east end station track No. 5, San Jose..........................	P-I
P-SA	Vehicle barricade detectors Dumbarton St. E-26.8 and Berkshire St. E-26.9, Redwood City	P-275
P-514	Spring switch, end double track, Lick......	
	Spring switch, end double track, Coyote....	P-635
P-660	Spring switch, west end siding, Perry......	
	Spring switch, east end siding, Perry.......	P-673
P-770	Spring switch, west end siding, Rucker.....	
	Spring switch, east end siding, Rucker.....	P-783
P-804	Spring switch, end double track, Gilroy....	
	Spring switch, end double track, Corporal...	P-SA
P-924	Earthquake detector, Pajaro River bridge.. Slide detector fence, Logan................	P-A
P-SA	Spring switch, end double track, Logan	

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM.

San Jose: Main track from signal 50 feet west of spring switch on wye to Signal 467 on Milpitas line not protected by block signals.

When Signals 463, 463.5, 464, 465, 466 or 467 display stop indication, trains and engines, after stopping, may proceed at restricted speed, provided proceed signal is received from switchman at The Alameda, green flag by day, green light by night, except No. 99 may pass Signal 463 displaying stop indication without stopping at restricted speed, provided proceed signal is 'received from switchman at The Alameda, green flag by day, green light by night, but must stop to clear crossover between station Tracks Nos. 4 and 5 just west of The Alameda.

Signal 464 on Signal Bridge 466 is a diverging route signal governing entrance into station tracks Nos. 1, 2, 3, and 4 from station track No. 4 Lower unit on Signal 466 governs entrance into these tracks through crossover from station track No. 5. When Signal 464 or lower unit of Signal 466 displays yellow aspect, movement into tracks Nos. 1, 2, 3 and 4 must not be made until proceed signal is received from switchman at The Alameda, green flag by day, green light by night, and then movement must not exceed 10 MPH. No signal protection beyond fouling point on these tracks.

When Signals 468.5, 470 or 473 display stop indication, trains and engines may proceed at restricted speed, provided proceed signal received from yardman at Park Ave., green flag by day, green light by night.

Station track No. 5 between Signal Bridge 466 and west limit of San Jose-Lick interlocking west of San Carlos St. overpass is not within interlocking limits, but signal indication will authorize movement of trains and engines between these points on this track. This includes movement to station track No. 5 governed by lower unit on Signal 473 on station track No. 4.

Signal 463.5 governs westward movements from station tracks Nos. 6 to 11 inclusive.

Starting indicators for westward trains on station tracks Nos. 1, 2 and 3 are controlled by switchman at The Alameda, and when displaying red aspect must not be passed unless proceed signal received from switchman, green flag by day, green light by night, and when displaying yellow aspect permit movement with caution to Signal 465.

RULE 513. Bayshore: Before making movement out of spur to San Francisco Union Stock Yards district, lineup must be obtained from operator.

Before making movements out of tracks between MP 1.23 and MP 7.07 onto westbound main track or eastbound main track, permission must be obtained from operator.

RULE 535. SPRING SWITCHES

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
Mountain View	Moffett Field Spur	Main track
San Jose	East end station Track 5	Main track
San Jose	Milpitas wye switch	Milpitas line main track

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Lick	End double track	Eastward track
Coyote	End double track	Westward track
Perry	West end siding	Main track
Perry	East end siding	Main track
Rucker	West end siding	Main track
Rucker	East end siding	Main track
Gilroy	End double track	Eastward track
Corporal	End double track	Westward track
Logan	End double track	Eastward track

RULE 605. INTERLOCKING

Fourth Street—San Francisco: Limits: Fourth Street Zone, from dwarf signals on station tracks Nos. 1 to 14 near Fourth Street to westward interlocking signal on signal bridge governing movements on main tracks near Sixth Street; **Potrero Zone** eastward main track MP 1.23 to MP 1.33, westward MP 1.80 to MP 1.26; **Bayshore Zone** eastward main track MP 4.21 to MP 5.06, westward main track MP 5.13 to MP 4.98; **Brisbane Zone** eastward main track MP 6.74 to MP 7.07, westward main track MP 6.95 to MP 6.89.

Leaving signals on station tracks Nos. 1, 2, 3, 13 and 14, San Francisco, are so arranged that operator may clear the signals temporarily, even though portion of train is beyond the signal. Before starting, call for signal. The signals on tracks Nos. 1, 2, 3, 13 and 14 are searchlight type, and necessary that trainman or yardman relay signal indication to engineman when they are cleared.

If signal cannot be cleared, movement may be made under Rules 628 and 670. Operator will give proceed signal with yellow flag by day and yellow light by night from the tower to authorize movement to the next interlocking signal.

Dual control switches at Potrero are equipped with selector lever and hand-throw lever. Dual control switches at Bayshore and Brisbane are hand operated by use of cranks. Crank for hand operating switches at Bayshore is located on instrument house south of track. Cranks for hand operating switches at Brisbane are located on instrument case at outbound lead and instrument house south of the tracks. When necessary to hand-throw switches, permission must be obtained from Operator, Fourth Street, and be governed by Rule 772. Instructions for hand operating power switches are mounted on instrument housing adjacent to crank holder.

At Fourth Street—One sound or siren or air whistle requires that trains and engines within limits of Interlocking must stop.

Redwood Jct.: Limits extend from signal bridge 740 feet west of tower to signal 700 feet east of tower on San Francisco Subdivision, and to signal 950 feet east of tower on Niles Subdivision.

Santa Clara: Limits extend from signal 2150 feet east of tower on San Francisco Subdivision westward main track to signal 1675 feet west of tower on San Francisco Subdivision eastward main track, and on Newark line to signal 1650 west of tower.

College Park: Limits extend from signal 1200 feet west of tower to Signal Bridge 466, and on main track to Signal Bridge 465; and from dwarf signal located 800 feet east of Newhall St. to West Taylor St. subway on No. 1 lead; and from Signal Bridge 466 to signal just west of spring switch at the junction of Milpitas line main track and Milpitas wye.

Electric switch locks on derails and crossover switches within these limits are under control of operator. Permission must be obtained to unlock derail or switch. Derail must be thrown first, then switch may be thrown.

Engines to move from roundhouse engine track to San Jose passenger station must not foul No. 1 lead until interlocking signal at inside crossover switch displays indication as shown in Rule 283, Fig. D, or Rule 288, Fig. C for eastward movement to station tracks Nos. 4 or 5.

Bell cord communicating signal between San Jose roundhouse and operator to be used in lieu of telephone when requesting authority to make movement from roundhouse to station tracks Nos. 4 or 5. Following code of signals to be used:

Roundhouse to passenger station	One pull of cord
Roundhouse to College Park	Two pulls of cord
For movements in roundhouse yard, when necessary to pass eastward interlocking signal	Three pulls of cord

On double track within San Jose Yard limits operator may arrange to move trains from one tower to another against current of traffic, after having understanding for each movement. Before moving trains against current of traffic operator must know that track to be used is clear of opposing trains and engines.

San Jose-Lick: Limits extend on main track from Signal Bridge 464, to light signal 700 feet east of end of double track at Lick on westward track, and to light signal 500 feet east of double track at Lick on eastward track; and on station tracks 4 and 5 from dwarf signal opposite Signal 473 to their connection with main track east of passenger station; and on Lick Branch to dwarf signal at fouling point; and on Vasona Branch from junction with main track to westward signal located 30 feet west of crossover.

Hand-throw switch to the spur track at MP 48.5, 500 feet east of Willow Street Subway is not equipped with electric switch lock and must not be operated without permission from the San Jose operator. Engines using this switch must occupy main track continuously or leave main switch open while work is being performed. This spur track must not be used by trains or engines for the meeting or passing of trains.

From Vasona Branch movement governed by interlocking signal located 30 feet west of crossover between main track and Vasona Branch. Upper unit governs to station tracks, and lower unit governs to main track. When both units display stop indication and it is desired to use connecting link to spur (California Packing Corporation), after stopping if crossover switches are lined normally and the track is seen to be clear to westward Signal 474.5 located at fouling point 250 feet west of interlocking signal, train or engine may proceed without obtaining permission from signal operator.

Westward Signal 471.5 at Park Ave. subway normally dark until line up is made. After permission received from operator, crossover switches may be lined, and if signal displays proceed indication movement may be made.

Movement to Vasona Branch from station track No. 5 governed by lower unit of Signal 470 located east of station, and from main track governed by lower unit of signal located 400 feet west of junction switch.

RULE 680. AUTOMATIC INTERLOCKING

San Jose-Lick Line (WPRR Crossing): Limits extend from signal located 700 feet west of crossing to signal 700 feet east of crossing.

When semi-automatic signals indicate "stop," Rule 663(c) and 507 will govern.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires movement as follows
W	273	Redwood Jct.	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.
W	7 ft. mast MP 44.20	Santa Clara	Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.
W	821	Gilroy	Westward trains stop and not proceed until indicator is extinguished, except, after stopping, trains may proceed on verbal authority of Gilroy operator. a. Trains making pick-up or set out will cut off and leave train east of Signal 821 taking only locomotive and those cars required for the operation. b. Through train not exceeding restricted speed to the next home signal.

RULE 705. HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
W	694	Morganhill	
H	720	San Martin	MP 74.6 San Martin
W	719	Morganhill	
*H	MP 68.5	Perry	West End of Perry

*Displays Flashing White Light when "H" illuminated.

Scanner Site MP	Direction	Location
70.3	East and West	Perry-Morganhill

Refer to Rule 705 All Subdivisions.

RULE 760. CENTRALIZED TRAFFIC CONTROL

Limits extend from MP 86.4 Corporal to MP 93.2 Logan.

GENERAL REGULATIONS

RULE 825. Cars must not be stored within 150 feet of all crossings of 9th Street at Gilroy, except spur track No. 125 serving Filice Warehouse.

Cars must not be stored within 150 feet of crossings of Salinas Road at Watsonville Jct.

When freight trains stop on receiving track in Watsonville Jct. yard, and road engine is detached, trainmen will set sufficient hand brakes on the rear of westward trains, and on the head end of eastward trains to secure trains.

RULE 830. Redwood City: Passenger trains, stopping at passenger station, should stop to clear Broadway crossing.

Westward passenger trains stop at Belmont to clear Ralston Rd. crossing.

Eastward passenger trains stop at Broadway to clear Broadway crossing.

Millbrae: Eastward passenger trains stop to clear Millbrae Ave.

Westward freight trains on Vasona Branch must not leave cars between Approach Circuit sign and El Camino Real while switching.

RULE 836. Cars must not be shoved ahead of engine on descending grade Permanente to Monta Vista.

AIR BRAKE RULES

RULE 17. On passenger trains, between Olympia and MP 127.60 and between MP 124.40 and MP 121.80, three retaining valves for six cars; four retaining valves for eight cars; five retaining valves for ten cars; and seven retaining valves for twelve cars must be turned up on head end of the train.

Retaining valves must be used on freight and mixed trains on descending grades as follows:

Felton to Santa Cruz, Permanente to Monta Vista

Without dynamic brake in operation: One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

Permissible Tons Per Unit Without Retaining Valves*

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking	425	625	500	775	1025
With dynamic brake in operation and WITH pressure maintaining system of braking	1300	1950	1600	2400	3200

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

*If any unit having basic dynamic brake is operated with units having extended range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF630, EF636, GF425 (except units 6700-6727), GF628, GF630, EF850B and GF850 are equipped with extended range dynamic brake.

All retaining valves must be turned in high pressure position on loaded cars and in low pressure on empty cars, Permanente to Monta Vista.

FREIGHT TRAINS

RULE 33. Felton to Santa Cruz, Permanente to Monta Vista: Maximum tonnage per operative brake—80 tons, except with dynamic brake and pressure maintaining system of braking in operation; with not more than 20 cars for each six axles of dynamic brake; with speed not exceeding 15 MPH, and all retaining valves in high pressure position on loaded cars and in low pressure position on empty cars—90 tons.

Should dynamic brake failure occur while handling in excess of 80 tons per operative brake, train may proceed at speed not exceeding 10 MPH if in judgment of conductor and engineer it is safe to do so, and provided retaining valves are used as prescribed by Air Brake Rule 17.

Not more than 40 cars will be handled in train, Permanente to Monta Vista.

The maximum tonnage per operative brake between Olympia and Santa Cruz is 90 tons.

Speed of freight trains, when tonnage per operative brake exceeds 60 tons, must not exceed 12 MPH, Olympia (MP 129.72) to Felton (MP 127.40), and MP 124.40 to MP 121.80.

Watsonville to Santa Cruz: When gross tonnage of freight train handling cars exceeds 85 tons per operative brake, speed must not exceed 20 MPH.

Descending grades where restrictions apply under Rule 33, All Subdivisions, are designated below:

Watsonville Jct. to Olympia (San Francisco Subdivision)

MP		MP	Speed
107.5	to	108.8	20 MPH
110.1	"	110.4	20 "
111.1	"	111.4	20 "
112.3	"	112.7	20 "
113.7	"	114.1	25 "
115.7	"	116.0	20 "
117.4	"	117.6	20 "
118.8	"	119.1	20 "

Olympia to Watsonville Jct.

MP		MP	Speed
117.8	to	117.6	20 MPH
113.7	"	113.0	25 "
111.0	"	110.7	20 "
110.0	"	109.5	20 "

PASSENGER TRAINS

RULE 39. Running test must be made on westward trains before reaching spring switch at end double track, Lick.

MISCELLANEOUS

1. Freight trains or engines with freight cars must not operate over station tracks Nos. 2, 3, 4 or 5 in San Jose Passenger station unless authorized by yardmaster or his representative.

2. All freight trains entering San Jose Yard slow to 8 MPH passing San Jose Yard Office so as to allow visual verification of consist.

3. Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
EP620A, EP624A, EP620B, EF415A, EP415A, EF415B, EP415B	Burlingame	Burlingame Material spur.
"	Howest	H. E. Casey spurs.
"	San Carlos	Drill spur on bay side of main track; west end of house track.
"	Redwood Jct.	S & W spur.
"	Redwood Jct.	On line to Redwood Harbor; All spurs off Dumbarton line.
"	Menlo Park	Peninsula Bldg. Matl. Co. spur.
"	Palo Alto	All spurs leading off drill track.
"	Mountain View	Shell Oil spur; beet spur.
"	Sunnyvale	All spurs off both drill tracks except Schuckl, National Can spur, Libby and Berry Growers spurs.
"	Morganhill	Dried fruit spur.
"	Lick Branch	All tracks.
BS615, BS616, BS615B, BS616B	San Mateo	Team Tracks.
All Engines	Santa Cruz	Cowell spur beyond street crossing. To spot cars beyond street crossing use reach.
"	Logan	Granite Rock Co. bunker loading tracks; scale track; stock pile tracks and beyond engine restriction sign at west end of empty set-out tracks Nos. 1, 2 and 3.

4. Load limit (car and contents):

*San Francisco-Watsonville Jct.	263,000 pounds
San Bruno-Daly City	240,000 pounds
Redwood Jct.-Redwood Harbor	240,000 pounds
San Jose-Permanente	240,000 pounds
Lick-Alamitos	240,000 pounds
Carnadero-Hollister	240,000 pounds
**Watsonville Jct.-Olympia	230,000 pounds
Santa Cruz-Davenport	230,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minumim axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

**Trains containing cars with truck centers of not less than 22-ft. having gross weight of car and lading in excess of 220,000-lbs. but not exceeding 230,000-lbs. must not be operated in excess of 5 MPH over structures at MP 112.57 and MP 112.93, near Aptos.

Unless authorized by Superintendent, heavier loads must not be handled.

5. LOCATION OF STOCK YARDS

Station	Capacity in cars	
Gilroy	18	(Water)
Watsonville Jct.	7½	(Water)
(Hollister Branch)		
Hollister	8	(Water)

6. Warning light has been installed on face of building of Preformed Lime Products, California Ave. No movements will be permitted into building until green aspect is displayed on this warning light, which indicates that moveable overhead crane has been retracted to lawful clearance.

7.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description	
0.00	San Francisco	Station umbrella sheds	Side
0.24	"	4th St. interlocking tower	Side
0.00-1.30	"	Dwarf signals	Side
1.28	"	Mariposa St. bridge	Overhead
1.29	"	AT&SFRy bridge	Overhead
1.34-1.68	"	Tunnel No. 1	Overhead and side
1.73	"	22nd Street bridge	Overhead
1.91	"	23rd Street bridge	Ovrehead
1.93-2.14	"	Tunnel No. 2	Overhead and side
3.15	"	Oakdale Avenue bridge	Overhead and side
3.19-3.65	"	Tunnel No. 3	Overhead and side
4.15	"	Paul Ave. bridge	Overhead and side
4.26-4.95	Bayshore	Tunnel No. 4	Overhead and side
9.07	South San Francisco	Signal bridge	Overhead
25.58	Redwood City	Signal bridge	Overhead
26.10	"	Signal bridge	Overhead
29.69	Palo Alto	San Francisquito Creek bridge	Overhead and side
45.99	San Jose	Signal bridge	Overhead
46.90	"	Station umbrella sheds	Side
119.70	Santa Cruz	San Lorenzo River bridge	Side
121.45 to 121.68	Eblis	Tunnel No. 6	Overhead and side
125.60 to 125.66	Big Trees	Tunnel No. 5	Overhead and side
126.35	Big Trees	San Lorenzo River bridge	Side
126.43	Big Trees	Redwood tree	Side
126.70	Big Trees	Redwood tree	Side
126.72	Big Trees	Redwood tree	Side

8.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard, and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
*Through slip switches	10
*Through turnouts on other than sidings	10
On branches	10
On Redwood Harbor spur	10
On Moffett Field spur	10
San Jose, passenger trains on station track No. 5:	
Eastward, end of double track to Signal Bridge 464	45
Eastward, Signal Bridge 464 to passenger station	30
Westward, passenger station to end double track	20
San Jose, passenger trains on station track No. 4:	
Westward, passenger station to Signal Bridge 464	30
Westward, Signal Bridge 464 to end of double track	45
Eastward, end of double track to passenger station	20
San Jose, freight trains on station tracks Nos. 4 and 5:	
Between end of double track and crossover at Julian St.	20
San Jose, passenger trains on station tracks Nos. 4 and 5:	
In either direction between passenger station and connection with main track east of station	30
Through all sidings, yard tracks and other tracks with engine running backward	10
*Passenger trains with commute equipment	15

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5, and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2
EASTWARD, SAN FRANCISCO TO WATSONVILLE JCT.:				
0.00 to	0.62		20	20
0.62 to	1.80		25	25
1.80 to	3.10		50	40
3.10 to	8.10		60	40
8.10 to	11.01		60	50
11.01 to	19.00		70	55
19.00 to	24.52		79	55
24.52 to	26.40	(Redwood City)	45	45
26.40 to	29.70		79	55
29.70 to	30.64		70	55
30.64 to	44.00		79	55
44.00 to	45.91	(end of double track)	60	55
45.91 to	46.90		15	15
46.90 to	47.29	(spring switch)	15	15
47.29 to	47.53	(power switch)	30	30
47.53 to	49.20		50	50
49.20 to	51.50		75	60
51.50 to	51.81	(55.70)	65	60
55.70 to	63.21		79	60
63.21 to	63.23	(Spring switch)	35	35
63.23 to	73.78		79	60
73.78 to	75.26		60	60
75.26 to	78.60		79	60
78.60 to	79.50		50	50
★79.50 to	82.00	(Gilroy)	25	25
82.00 to	83.41		60	60
83.41 to	86.47		65	60
86.47 to	86.49	(spring switch)	25	25
86.49 to	87.94		50	50
87.94 to	88.94		35	35
88.94 to	92.05		45	45
92.05 to	92.97		35	35
92.97 to	92.99	(spring switch)	25	25
92.99 to	94.38		55	55
94.38 to	98.00		70	60
98.00 to	100.00		45	45
100.00 to	100.40		35	35

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED
MP	MP	Column:	1	2
WESTWARD, WATSONVILLE JCT. TO SAN FRANCISCO:				
100.40 to	100.00		35	35
100.00 to	98.00		45	45
98.00 to	94.38		70	60
94.38 to	92.99		55	55
92.99 to	92.97	(spring switch)	25	25
92.97 to	92.05		35	35
92.05 to	88.94		45	45
88.94 to	87.94		35	35
87.94 to	86.49		50	50
86.49 to	83.41		65	60
83.41 to	82.00		60	60
★82.00 to	79.50	(Gilroy)	25	25
79.50 to	78.60		50	50
78.60 to	75.26		79	60
75.26 to	73.78		60	60
73.78 to	62.00		79	60
62.00 to	55.70	(51.81)	65	60
51.81 to	51.32		65	60
51.32 to	51.30	(spring switch)	35	35
51.30 to	49.20		75	60
49.20 to	47.53		50	50
47.53 to	47.29	(spring switch)	30	30
48.29 to	46.90		15	15
46.90 to	45.91	(end of double track)	15	15
45.91 to	45.86		25	25
45.86 to	44.00		60	55
44.00 to	26.40		79	55
26.40 to	24.52	(Redwood City)	45	45
24.52 to	19.00		79	55
19.00 to	11.01		70	55
11.01 to	8.10		60	50
8.10 to	3.10		60	40
3.10 to	1.80		50	40
1.80 to	0.62		25	25
0.62 to	0.00		20	20

★Speed may be resumed after engine of eastward train has passed Lucesa Avenue Crossing, MP 81.70 and after engine of westward train has passed Leavesly Road crossing MP 79.58.

Between San Jose and Watsonville Jct. freight trains and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 65 MPH provided these trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	70
75	69
80	68
85	67
90	66
95	65
100	64
105	63
110	62
115	61
120	60
125	58
130	56
135	54
140	52
145	50

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All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
EASTWARD, SAN JOSE TO PERMANENTE:		
47.21 to 47.38	10	10
47.38 to 51.00	20	20
51.00 to 53.05	30	30
48.06 to 47.86	10	10
47.86 to 47.61	①25	①25
47.61 to 39.50	①35	①30
39.50 to 37.50 (Permanente)	15	15
EASTWARD, SOUTH SAN FRANCISCO TO DALY CITY		
9.59 to 7.39	15	15
EASTWARD, SOUTH SAN FRANCISCO TO BADEN	15	15
EASTWARD, LICK TO ALAMITOS:		
55.34 to 55.52	..	15
55.52 to 58.99	..	20
EASTWARD, CARNADERO TO HOLLISTER:		
82.99 to 83.01 (junction switch)	15	15
83.01 to 94.40	35	35
94.40 to 95.81	20	20
EASTWARD, WATSONVILLE JCT. TO OLYMPIA:		
100.46 to 100.70 (junction switch)	15	15
100.70 to 101.40	25	25
101.40 to 102.20	8	8
102.20 to 112.57	25	25
112.57 to 113.00	20	20
113.00 to 116.10	25	25
116.10 to 116.25	15	15
116.25 to 119.20	25	25
119.20 to 120.00	20	20
120.00 to 121.20	15	15
121.20 to 122.50	20	20
122.50 to 126.50	15	15
126.50 to 129.72	25	20
EASTWARD, SANTA CRUZ TO DAVENPORT:		
79.35 to 80.86 (120.42) (junction switch)	20	20
80.86 to 81.36	15	15
81.36 to 91.08	20	20

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
WESTWARD, PERMANENTE TO SAN JOSE:		
37.30 to 39.50 (Permanente)	①10	①10
39.50 to 47.61	35	30
47.61 to 47.86	①25	①25
47.86 to 48.06	10	10
53.05 to 51.00	30	30
51.00 to 47.38	20	20
47.38 to 47.21	10	10
WESTWARD, DALY CITY TO SOUTH SAN FRANCISCO:		
7.39 to 13.55	15	15
WESTWARD, BADEN TO SOUTH SAN FRANCISCO	15	15
WESTWARD, ALAMITOS TO LICK:		
58.99 to 55.52	..	20
55.52 to 55.34	..	15
WESTWARD, HOLLISTER TO CARNARDERO:		
95.81 to 94.40	20	20
94.40 to 83.01	35	35
83.01 to 82.99 (junction switch)	15	15
WESTWARD, OLYMPIA TO WATSONVILLE JCT.:		
129.72 to 126.50	25	20
126.50 to 122.50	15	15
122.50 to 121.20	20	20
121.20 to 120.00	15	15
120.00 to 119.20	20	20
119.20 to 116.25	25	25
116.25 to 116.10	15	15
116.10 to 113.00	25	25
113.00 to 112.57	20	20
112.57 to 102.20	25	25
102.20 to 101.40	8	8
101.40 to 100.70	25	25
100.70 to 100.46 (junction switch)	15	15
WESTWARD, DAVENPORT TO SANTA CRUZ:		
91.08 to 81.36	20	20
81.36 to 80.86	15	15
80.86 to 79.38 (junction switch)	20	20

①With EP624 class engines, 30 MPH.

①ES410, FS412, BS412 class engines must not exceed 25 MPH, and EF418, EP418 and AS418 class engines must not exceed 30 MPH between Vasona and MP 39.5 (Monta Vista-Permanente).

Light engines may operate at Column 2 speeds.

RULE 10-J. Speed signs to left of track:

Eastward	Reading	Westward	Reading
		MP 118.37	79–60
MP 120.75	79–60	MP 163.10	79–60
MP 211.15	50	MP 195.36	40
MP 228.37	45		
MP 234.34	35		

Westward speed sign at MP 106.67 reading 40 is located 1.17 miles instead of three-fourths mile from restriction.

Eastward speed sign at MP 117.30 reading 25 is located 1.07 miles instead of three-fourths mile from restriction.

RULE 21. Identification of superior trains in CTC limits between Santa Margarita and San Luis Obispo must be made and such identification will apply at Santa Margarita or San Luis Obispo.

Identification of superior trains in CTC limits between Watsonville Jct. and Salinas must be made and such identification will apply at Salinas.

RULE 82-A. Crew ordered for No. 141 may assume schedule at Monterey without clearance.

Trains must obtain clearance Monterey only when operator is on duty.

Trains to Monterey Branch must obtain clearance bearing chief dispatcher's OK before leaving Castroville, only when train order operator on duty.

RULE 83-A. At the following stations, only the trains indicated will register:

Castroville....Trains to or from Monterey Branch.
Salinas.......Trains originating or terminating.

Registration of eastward light engines, terminating at San Luis Obispo, may be telephoned on arrival at roundhouse to train order operator who must enter same on register and verify by repeating registration.

RULE 83-B. At open train-order offices, trains may register by ticket as follows:

Watsonville Jct..Nos. 98, 126, 374, 99, 373 and 141.
Castroville......Trains to or from Monterey Branch.

RULE 85. A section must not pass and run ahead of another section of the same schedule in CTC limits, between Watsonville Jct. and Salinas and between San Luis Obispo and Santa Margarita, without first exchanging train orders with the section to be passed, each section to display signals if necessary.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
96.11	Watsonville Jct.	101.25
110.04	Castroville (Monterey Branch)	112.09
CTC Limits	Salinas	126.00
	" (Spreckels Branch)	123.87
132.60	Gonzales	136.30
142.44	Soledad	144.65
162.17	King City	164.72
233.86	Santa Margarita	236.75
249.56	San Luis Obispo	254.00
123.30	Monterey	127.66
127.70	Pacific Grove	129.88

Watsonville Jct.: Eastward freight trains, except No. 374 must not pass Signal 984 unless proceed signal received from yardman, green flag by day, green light by night.

Westward freight trains, except No. 373 must not pass Signal 1001 unless proceed signal received from switchman, green flag by day, green light by night.

RULE 99. Engines moving between the west yard limit sign Pacific Grove and east yard limit sign Monterey will move as provided by Rule 99 and the first sentence of Rule S-99-B

RULE 99-C. Will apply on Monterey Branch.

RULE 102. Should a passenger train break-in-two, or an emergency application of brakes occur while in motion on the grade between Santa Margarita and San Luis Obispo, forward brakeman will immediately go toward rear, close angle cock at opening if train has parted, set hand brakes and turn up retaining valves on detached portion. After train is coupled air must be applied from engine before hand brakes and retaining valves are released.

If necessary to leave detached portion on main track, rear truck of detached portion ascending grade, must be chained to rail in such manner as to derail car should there be an uncontrolled movement.

RULE 103-A. Automatic crossing gates:

King City: Bitterwater Road crossing MP 163.4. Eastward trains, stopping on main track to do switching must stop 500 feet west of crossing to avoid unnecessary operation of gates. White marker post 500 feet west of crossing.

Paso Robles: Westward trains, stopped at station, blocking 10th Street and westward trains or engines on siding, or trains delayed between 10th and 13th Streets must not exceed 10 MPH between 12th and 13th Streets and must not enter 13th Street until gates are down.

Eastward trains leaving train west of Signal 2158, stop 250 feet west of signal. When train ready to depart, gates must be lowered by member of crew inserting switch key in receptacle located on Signal 2158.

San Luis Obispo: Foothill Blvd. crossing MP 250.5. Gates will raise after time expires when trains in siding stop clear of crossing. When train is ready to proceed, gates must be lowered manually by inserting switch key in receptacle located on post on either side of crossing. Turn key one half turn to right. Crossing must be occupied within one minute or gates will raise.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Spreckels Jct.—Airport Blvd. crossing on east end yard track No. 410.
Monterey—Hoffman Ave. crossing on Custom House Packing Co. spur.
Castroville—Crossing on D'Arrigo Bros. Co. spur. Crossing E-111.2-C, east leg of wye to Monterey Branch.
Ord—State Highway crossing on tracks Nos. 2 and 3 at MP 119.50 but must wait until automatic warning device has been operating 20 seconds or more before crossing over highway.
Salinas—John St. crossing on tracks Nos. 200, 248 and 250.
King City—Bitterwater-Metz Road on tracks not protected by automatic crossing gates.

RULE 104. The normal position of rigid switches at junctions is as follows:

Castroville.....Monterey Branch, for Salinas line.
Spreckels Jct...Spreckels Branch, for Salinas line.

RULE 105. No. 1 siding at Salinas extends from SA Signal at MP 1164 to crossover just west of Signal 1178. No. 2 siding extends from crossover just east of Signal 1178 to crossover just west of Signal 1186.

Siding at Gonzales extends from west switch to crossover at station building.

Siding on station side of main track at Soledad is designated as No. 2 siding, and siding on opposite side of main track is designated as No. 1 siding.

Siding on ocean side of main track at McKay is designated as No. 2 siding and siding on opposite side of main track is designated as No. 1 siding.

Santa Margarita: Siding extends from the end of CTC MP 236.6 to spring switch MP 232.92, capacity 364 cars, and will be used by westward trains only, unless otherwise directed by train dispatcher. Crossover switches between main track and siding MP 234.2 must not be used unless authorized by train dispatcher.

RULE 211. Eastward trains receiving an eastward proceed "SA" signal at west end of Salinas, MP 116.4, are authorized to proceed on main track to train order office.

RULE 221. Castroville is train order office for trains via Monterey branch only.

Salinas is train order office for eastward trains and for westward trains originating. Westward trains originating will obtain clearance only when operator on duty.

RULE 292. San Luis Obispo: When eastward "SA" signal at west end of double track (MP 251.75) displays stop indication, train or engine after stopping may proceed without calling dispatcher if flashing white light is also displayed.

RULE 306. The following block signals equipped with triangular plate displaying the letter "P" have included in their control limits some special protective device:

Eastward Signal	Protection	Westward Signal
	Spring switch, end of double track, Watsonville Jct.	P-SA
P-A	Spring switch, west end siding, Castroville	
	Spring switch, west switch, Monterey branch.	
	Spring switch, east end siding, Castroville.	P-A
P-SA	Spring switch, west end No. 1 siding, Salinas.	
P-1214	Vehicle barricade detector Harris Rd. E-121.8	P-1225
P-1878	Fire and collision detector Sargent Creek bridge, MP 188.15	P-1889
P-1950	Spring switch, west end siding, Bradley	
P-2278	Flood detector, east end Henry Siding, MP 228-87	P-2289
P-2328	Spring switch, west end siding, Santa Margarita	
P-2416	Slip-out detector, West End Tunnel No. 10, MP 241.6	P-2419
P-A	Slide detector fence, Chorro	P-A
P-A	Fire detector, Steiner Creek bridge, Goldtree	P-2493

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 516. Overlap posts:

Spreckels Jct	Westward trains.
Santa Margarita	Eastward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Watsonville Jct	End double track	Westward track
Castroville	West end siding	Main track
Castroville	Switch to Monterey branch	Main track
Castroville	East end siding	Main track
Salinas	West end No. 1 siding	Main track
Bradley	West end siding	Main track
Santa Margarita	West end siding	Main track

RULE 705. Letter type indicators.

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
S	Eastward	Castroville West end	Trains via Salinas enter siding.
	"A" Signal	Castroville	Trains via Ord enter Monterey Branch.
S	Westward "A" Signal	East end Castroville	Trains via Moss Landing enter siding.
S	Eastward "SA"	West end Salinas	Enter siding No. 1.
M	1191	Salinas	Proceed on main track to fouling point west end Siding No. 1, Salinas, MP 116.43.

RULE 705. HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
H	1365	Gonzales	MP 133.9 Gonzales
W	1388	Soledad	
W	1417	Gonzales	
H	1418	Soledad	MP 144.0 Soledad
H	1761	San Lucas	MP 172.5 San Lucas
W	1780	San Ardo	
H	1806	San Ardo	MP 182.8 San Ardo
W	1807	San Lucas	

Scanner Site

MP	Direction	Location
139.6	East and West	Gonzales-Soledad
178.8	East and West	San Lucas-San Ardo

Refer to Rule 705 All Subdiviisions.

RULE 760. CENTRALIZED TRAFFIC CONTROL

Limits extend from end of double track Watsonville Jct. to west switch No. 1 siding Salinas.

Limits extend from east end siding Santa Margarita to end of double track San Luis Obispo.

Lower unit of eastward signal at end double track San Luis Obispo governs only to CTC limit at fouling point on westward track, and trains and engines must not accept proceed indication for diverging route until verbal understanding has been had with yardmaster or his representative that protection had been provided on westward track, except that proceed signal from switchman, green flag by day or green light by night, may be accepted as authority to move from CTC limit to the first switch leading to yard tracks only.

GENERAL REGULATIONS

RULE 825. When freight trains stop on receiving track in Watsonville Jct. yard and road engine is detached, trainmen will set sufficient hand brakes on the rear cars on westward trains to secure trains.

When freight trains stop on receiving track at San Luis Obispo and road engine is detached, trainmen will set sufficient hand brakes on the head end of eastward trains to secure trains.

Portable rail skids are hung on posts at lower end of sidings at:

Santa Margarita Cuesta Serrano Chorro Goldtree

When necessary to leave cars on any of these sidings permission must first be obtained from chief train dispatcher. See Rule 825 all sub-divisions.

RULE 827. Beet train without dynamic brakes in operation Tunnel No. 6 to San Luis Obispo must stop 10 minutes at Serrano for wheel heat radiation and train inspection.

RULE 830. King City: Through freight trains picking up and/or setting out cars must not block Lonoak road crossing at MP 164.3.

AIR BRAKE RULES

RULE 17.

PASSENGER TRAINS

Tunnel No. 6 to San Luis Obispo.
Tunnel No. 6 to Santa Margarita.

Without dynamic brake in operation turn up all accessible retaining valves.

FREIGHT AND MIXED TRAINS

Retaining valves must be used on descending grades as follows:

Tunnel No. 6 to Santa Margarita.
Tunnel No. 6 to San Luis Obispo.
Goldtree to Camp San Luis Obispo.

WITHOUT DYNAMIC BRAKE IN OPERATION: One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

Permissible Tons Per Unit Without Retaining Valves*

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking	525	775	625	950	1250
With dynamic brake in operation and WITH pressure maintaining system of braking	1500	2250	1800	2700	3600

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

*If any unit having basic dynamic brake is operated with units having extending range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF625, EF630, EF636, GF425 (except units 6700-6727), GF628, GF630, EF850B and GF850 are equipped with extended range dynamic brake.

When dynamic brakes are not used on helper engine(s), tonnage of such engine(s) must be added to that of train in determining the number of retaining valves required.

EASTWARD . . . . . . Tunnel No. 6 to San Luis Obispo.

With no dynamic brake in operation and pressure maintaining system of braking not being used, one retaining valve for each 65 tons in train. If gross tonnage exceeds 65 tons per operative brake, retaining valves must be turned up on all cars.

When dynamic brake is in operation and tonnage of train exceeds 1025 tons per four-axle unit or 1525 tons per six-axle unit, one retaining valve for each 125 tons in train;

Except, when dynamic brake is in operation and pressure maintaining system of braking is being used and tonnage of train exceeds 1525 tons per four-axle unit or 2025 tons per six-axle unit, one retaining valve for each 125 tons in train.

When dynamic brakes are not used on helper engines, tonnage of such engines must be added to that of train in determining the number of retaining valves required.

When majority of cars in freight train consist of loaded beet cars and train exceeds 75 tons per operative brake, all retaining valves must be in low pressure (horizontal) position, from Tunnel No. 6 to San Luis Obispo.

Between San Luis Obispo and Santa Margarita trains handled by EP418, EF418 or AS418 class engines must not use more than four dynamic brakes; with GS407 class engines not more than two dynamic brakes may be used; with two GS407 and two EP418, EF418 or AS418 class engines not more than three dynamic brakes may be used; with one GS407 and three EP418, EF418 or AS418 class engines four dynamic brakes may be used.

Units on which dynamic brakes are not in use must have dynamic brake jumper cable disconnected.

FREIGHT TRAINS

RULE 25. Air brake test must be made at the following location:

Santa Margarita . . Eastward trains only when continuity of brake is disturbed.

RULE 33.

Tunnel No. 6 to Santa Margarita.
Tunnel No. 6 to San Luis Obispo.
Goldtree to Camp San Luis Obispo.

Maximum tonnage per operative brake—80 tons, except with dynamic brake and pressure maintaining system of braking in operation; with not more than 20 cars for each six axles of dynamic brake; with speed not exceeding 20 MPH, and with all retaining valves in use and in high pressure position on loaded cars—100 tons.

Should dynamic brake failure occur while handling in excess of 80 tons per operative brake, train may proceed at speed not exceeding 15 MPH if in judgment of conductor and engineer it is safe to do so, and provided retaining valves are used as prescribed by Air Brake Rule 17.

Castroville to Monterey: When gross tonnage of freight trains handling cars exceeds 85 tons per operative brake, speed must not exceed 20 MPH.

Descending grades were restrictions apply under Rule 33, ALL SUBDIVISIONS, are designated below:

Eastward—Tunnel 6 to San Luis Obispo
MP 239.65 to MP 252.10 . . . . Speed 20 MPH

Castroville to Monterey
MP 116.5 to MP 117.0 . . . . Speed 20 MPH
MP 117.9 to MP 118.1 . . . . Speed 20 MPH
MP 119.9 to MP 120.4 . . . . Speed 20 MPH
MP 122.2 to MP 123.1 . . . . Speed 20 MPH

Westward—Tunnel 6 to Santa Margarita
MP 239.65 to MP 235.5 . . . . Speed 20 MPH

Monterey to Castroville
MP 121.3 to MP 120.9 . . . . Speed 25 MPH
MP 119.9 to MP 119.1 . . . . Speed 25 MPH
MP 117.9 to MP 117.0 . . . . Speed 25 MPH

PASSENGER TRAINS

RULE 39. Running test must be made immediately after passing summit in Tunnel No. 6 in both directions.

MISCELLANEOUS

1. Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
EP620A, EP624A, EP620B, EF415A, EP415A, EF415B, EP415B	Castroville	All industry and spur tracks.
"	Salinas	Leads 4, 35, 55, 57, 200, 210, and 250, and all industry spurs; Lead 115 east of girder-rail crossing; also spurs 151 and 153.
"	Lapis	Spur.
"	Retreat	Spur.
"	Monterey	House track; team track; and all industry tracks.

2. Load limit (car and contents):

*Watsonville Jct.-San Luis Obispo	263,000 pounds
Castroville-Lake Majella	240,000 pounds
Spreckels Jct.-Spreckels	240,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

Unless authorized by Superintendent, heavier loads must not be handled.

4. LOCATION OF STOCK YARDS

Station	Capacity in cars
Watsonville Jct.	7½ (Water)
Soledad	7½ (Water)
King City	36½ (Water)
(1 corral 2½ cars no water)	
San Ardo	12 (Water)
Paso Robles	40 (Water)
(1 corral 2 cars no water)	
Santa Margarita	18½ (Water)
San Luis Obispo	27 (Water)

5.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
155.28– 155.54	Metz	Tunnel No. 5½ ... Side
113.46– 113.60		Salinas River bridge ... Side
200.55– 200.67		Salinas River bridge. Overhead and Side
222.03	Templeton	Overhead crossing ... Side
223.39		Graves Creek bridge ... Side
239.29– 239.97	Cuesta	Tunnel No. 6 ... Overhead and side
240.11– 240.37	Thyle	Tunnel No. 7 ... Overhead and side
240.61– 240.70	“	Tunnel No. 8 ... Overhead and side
240.86– 240.97	“	Tunnel No. 9 ... Overhead and side
242.26	Serrano	Signal bridge ... Overhead
245.85– 245.99	Chorro	Tunnel No. 11 ... Overhead and side
248.26	Goldtree	Signal bridge ... Overhead
251.16	Hathaway	Overgrade crossing. Overhead and side

SPECIAL INSTRUCTIONS—SALINAS SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5, and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2
EASTWARD, WATSONVILLE JCT. TO SAN LUIS OBISPO:		
100.40 to 100.70 (end double track)	35	35
100.70 to 100.74 (spring switch)	25	25
100.74 to 108.21	50	50
108.21 to 118.37	79	60
118.37 to 120.75 (Salinas)	25	25
120.75 to 125.60	79	60
125.60 to 137.20	65	60
137.20 to 147.68	79	60
147.68 to 149.25	50	50
149.25 to 152.83	55	55
152.83 to 154.00	50	50
154.00 to 155.53	65	60
155.53 to 158.00	70	60
158.00 to 163.10	79	60
163.10 to 164.00	60	60
164.00 to 167.43	79	60
167.43 to 168.80	50	50
168.80 to 175.58	79	60
175.58 to 175.82	70	60
175.82 to 185.50	79	60
185.50 to 188.17	60	60
188.17 to 190.19	55	55
190.19 to 192.92	65	60
192.92 to 193.70	40	40
193.70 to 194.35	30	30
194.35 to 197.43	70	60
197.43 to 197.80	60	60
197.80 to 200.79	70	60
200.79 to 211.90	60	60
211.90 to 212.16	50	50
212.16 to 213.93	60	60
213.93 to 216.80	65	60
216.80 to 217.23	50	50
217.23 to 219.15	60	60
219.15 to 220.02	40	40
220.02 to 227.20	55	55
227.20 to 227.46	50	50
227.46 to 229.15	55	55
229.15 to 231.36	45	45
231.36 to 235.10	60	60
235.10 to 236.75	35	35
236.75 to 241.45	25	25
241.45 to 241.60	15	15
241.60 to 248.30	25	25
248.30 to 251.50	40	40
251.50 to 252.10	25	25

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2
WESTWARD, SAN LUIS OBISPO TO WATSONVILLE JCT.:		
252.10 to 251.50	25	25
251.50 to 248.30	40	40
248.30 to 241.60	25	25
241.60 to 241.45	15	15
241.45 to 236.75	25	25
236.75 to 235.10	35	35
235.10 to 231.36	60	60
231.36 to 229.15	45	45
229.15 to 227.46	55	55
227.46 to 227.20	50	50
227.20 to 220.02	55	55
220.02 to 219.15	40	40
219.15 to 217.23	60	60
217.23 to 216.80	50	50
216.80 to 213.93	65	60
213.93 to 212.16	60	60
212.16 to 211.90	50	50
211.90 to 200.79	60	60
200.79 to 197.80	70	60
197.80 to 197.43	60	60
197.43 to 194.60	70	60
194.60 to 193.92	40	40
193.92 to 193.70	30	30
193.70 to 192.92	60	60
192.92 to 190.19	65	60
190.19 to 188.17	55	55
188.17 to 185.50	60	60
185.50 to 175.82	79	60
175.82 to 175.58	70	60
175.58 to 168.80	79	60
168.80 to 167.43	50	50
167.43 to 164.00	79	60
164.00 to 163.10	60	60
163.10 to 158.00	79	60
158.00 to 155.53	70	60
155.53 to 154.00	65	60
154.00 to 152.83	50	50
152.83 to 149.25	55	55
149.25 to 147.68	50	50
147.68 to 137.20	79	60
137.20 to 125.60	65	60
125.60 to 120.75	79	60
120.75 to 118.37 (Salinas)	25	25
118.37 to 108.21	79	60
108.21 to 100.74 (end of double track)	50	50
100.74 to 100.40	35	35

(Continued on page 21)

Light engines may operate at Column 1 speeds not exceeding 70 MPH, except on descending grades when dynamic brakes are not operating light engines must not exceed Column 2 speeds.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH, except 65 MPH authorized between Watsonville Jct. and Santa Margarita, consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake	Number of Cars	Tons Per Operative Brake
70	70	110	62
75	69	115	61
80	68	120	60
85	67	125	58
90	66	130	56
95	65	135	54
100	64	140	52
105	63	145	50

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All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
EASTWARD, CASTROVILLE TO LAKE MAJELLA:		
110.10 to 110.70	15	15
110.70 to 111.40	30	20
111.40 to 114.73	30	30
114.73 to 119.70	30	25
119.70 to 120.00	30	20
120.00 to 121.23	30	25
121.23 to 122.38	25	20
122.38 to 125.70	30	25
125.70 to 127.30	25	20
127.30 to 130.23	15	15
EASTWARD, SPRECKELS JCT. TO SPRECKELS		15

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
WESTWARD, LAKE MAJELLA TO CASTROVILLE:		
130.23 to 127.30	15	15
127.30 to 125.70	25	20
125.70 to 122.38	30	25
122.38 to 121.23	25	20
121.23 to 120.00	30	25
120.00 to 119.70	30	20
119.70 to 114.73	30	25
114.73 to 111.40	30	30
111.40 to 110.70	30	25
110.70 to 110.10	15	15
WESTWARD, SPRECKELS TO SPRECKELS JCT.	..	15

Light engines may operate at Column 1 speed.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, ballon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
Castroville wye	5
East leg of wye Spreckels Jct.	5

RULE 14(l). Whistle signal must be sounded and bell kept ringing when entering or leaving the Sugar Co.'s yard at Alvarado or approaching their road crossing.

RULE 26. West Oakland (Passenger Yard): Electric switch locks on west switches Tracks 2 to 5, inclusive, Track 19 and on east switches Tracks 14 to 18, inclusive.

Power operated derails on west end Track 6 and on east end Tracks 2 to 6, inclusive, and Track 13.

RULE 26-A. Mulford: Elevated walkway constructed across Tracks 2 and 3, opposite Door 9, of the Kaiser Aluminum and Chemical Company, Mulford. When red light is displayed above entrance to tracks movements must not be made beyond Door 8. When red light is not displayed elevated walkway is clear and movements may be made the entire length of the tracks.

RULE 82-A. Trains to Niles Subdivision receiving clearance at San Jose or College Park Tower may leave Santa Clara without clearance.

RULE 83. Identification may be made by eastward trains between Magnolia Tower and Elmhurst to be applied at end of double track. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Identification may be made by eastward trains between Redwood Jct. and Belle Haven to be applied at end of double track. Reduce speed sufficiently to permit identification.

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst, outside of D-251 limits between Sacramento and West Oakland and end of double track Martinez on Tracy line provided superior trains moving in the same direction are not passed in interlocking limits or territory where Rule D-251 is applicable.

RULE 83-A. At the following stations only trains indicated will register:

West Oakland .... }
Newark .... } Trains originating
Niles .... } or terminating.
Livermore .... }

Extra trains will register at Niles Tower.

Trains originating or terminating at San Jose Yard will register at the San Jose Yard Office.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Niles Tower .... All trains.
Redwood Jct. .... All trains.
College Park Tower—All trains arriving or departing via Milpitas Line.
Santa Clara .... All trains.

RULE 93. Yard limits in which the provisions of Rule 93 will apply, are established at the following points:

West MP		East MP
	Oakland (Martinez line)	17.35
	" (Niles line)	15.82
	" (Alvarado line)	14.01
14.02	Mulford	18.00
15.83	Hayward	21.69
24.00	Alvarado	26.00
78.50	Tracy (Martinez-Los Banos line)	85.64
66.50	" (Niles-Lathrop line)	74.37
24.44	Redwood Jct. (San Mateo-Newark line)	28.20
	" (Palo Alto line)	27.17
35.20	Newark (Centerville-Redwood Jct. line)	40.50
28.79	" (Alvarado-Santa Clara line)	34.50
39.00	Alviso	43.00
40.51	Niles (Tracy-Redwood Jct. line)	30.67
26.60	" (Hayward-Milpitas line)	30.95
41.70	East Pleasanton	45.89
63.25	" (San Ramon line)	
45.89	Livermore-Ulmar	51.20
54.03	Altamont	55.64
32.00	Milpitas	42.50
43.47	San Jose (Palo Alto-Coyote line)	56.00
43.55	" (Milpitas line)	
43.74	" (Alviso line)	

Niles: Unless otherwise instructed, eastward trains operating via Decoto enroute to Livermore line at Niles Junction, must take siding at Niles.

Tracy: Trains moving on main track in either direction will move between junction switch, MP 70.62, and west switch of train yard by block signals whose indications will supersede the superiority of trains.

RULE D-97-A. Will apply as follows: Between West Oakland and Elmhurst; Redwood Jct. and Belle Haven.

RULE 103-A. Automatic Crossing Protection.

On double track automatic crossing gates do not operate for against current of traffic movements at territory speeds and Rule 103-A will apply.

Oakland: When moving against current of traffic flagman must protect crossing before movement is made over Grove, Broadway, Franklin and Webster Streets and 29th Avenue.

Hayward: Crossing gate key control installed at "A" Street to operate crossing gates for movement on tracks other than main track.

Newark: Movements from Leslie Salt Plant across Central Avenue will stop at "STOP" sign and not enter crossing until crossing gates are down.

Alviso: Eastward trains passing signal 382 per Rule 507 will not exceed 10 MPH approaching Sunnyvale Road MP 39.8.

Westward trains passing signal 403 per Rule 507 will not exceed 10 MPH approaching Elizabeth Street MP 39.1.

Trains which stop or are delayed between MP 34.1 and MP 39.8 shall not exceed 10 MPH approaching crossings MP 39.1 or MP 39.8 and not enter the crossing until it is known crossing signals are operating.

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew.

Oakland-
Market St. . Pacific Pool Warehouse No. 7,
Mulford . . . . . . Crossing Maitland Drive on Airport drill, L-16.5-C.

Shinn: Trainmen must protect Ford Lane Underpass when switching on Blue Diamond Lead.

RULE 105. Hayward: Siding extends from MP 18.74 to MP 19.77.

Newark: Siding on Tracy-Redwood Jct. line is west of Elmhurst-Santa Clara line crossing extending from MP 37.27 to MP 36.19.

Siding on Elmhurst-Santa Clara line is east of Tracy-Redwood Jct. line crossing extending from MP 31.00 to MP 32.22.

East Pleasanton: Siding is first track north of main track extending from MP 42.91 to MP 44.02.

RULE 221. West Oakland is a train-order office only for trains originating.

Light type train order signal installed on the west side of the Fruitvale Tower Building.

Mulford, Niles and East Pleasanton are train-order offices only for trains originating when operator is on duty.

Warm Springs is train-order office for originating or terminating trains only.

Eastward trains to San Francisco Subdivision may leave Santa Clara without clearance.

Trains from Niles Subdivision must obtain clearance before leaving Redwood Jct.

RULE D-251. Will apply as follows: Between West Oakland and Elmhurst.

RULE 291-A. Flashing yellow lamp unit on mast of eastward interlocking signal on Coach Yard lead is displayed in both eastward and westward directions. Illumination of this flashing light observed from either direction will authorize an eastward reverse move toward 16th St. or Bays following a westward move into Coach Yard which does not clear the interlocking plant.

RULE 306. Following block signals equipped with a triangular plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P-SA	Elmhurst	
	Spring switch to Stonehurst Line	Elmhurst P-SA Niles Line
	Spring switch, end of double track	Elmhurst P-SA Santa Clara Line
	Spring switch, Shinn	P-423
	Spring switch, end double track, Redwood Jct.	P-285
P-290	Spring switch, Niles	
	Spring switch, Milpitas wye, San Jose	P-I
P-710	Spring switch, junction to Los Banos Line, Tracy	
	Spring switch to yard, Tracy	P-829

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Niles: Signal 291 governs movements, through junction switch, from Tracy line. Signal 293 governs movements, through junction switch, from San Jose line.

Top unit of Signal P-290 governs movements to Tracy line and lower unit governs movements to San Jose line.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

RULE 516. Overlap posts:

Hayward (1200 feet west of Signal 199)	Westward trains.
San Leandro (515 feet east of Davis Street)	Eastward trains

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Redwood Jct.	End double track	Westward track
San Jose	Milpitas main track to track leading to East leg of Milpitas Wye, San Jose Yard MP 46.80	Milpitas Line Main Track

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
West Oakland	1st and 16th line	16th St. line
Elmhurst	Westward track to Stonehurst Line	Stonehurst Line
Elmhurst	End of Double Track	Westward track
Shinn	East end siding	Main track
Niles	Junction switch west of station	San Jose line

RULE 605. INTERLOCKING

On double track within Oakland yard limits operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding for each movement. Before moving trains against current of traffic operator must know that track to be used is clear of opposing engines and trains.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yards lead 40, 50 and 60.

A flashing yellow lamp unit installed on the mast of the eastward interlocking signal on the Coach Yard lead track and will be displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operating on yard tracks.

Magnolia Tower (First and Chestnut Sts.): Limits extend on eastward main track from signal 1600 feet west of WPRR crossing to dwarf signal 500 feet east of WPRR crossing, and on westward main track from signal 500 feet east of WPRR crossing to dwarf signal 480 feet west of crossing.

When necessary to perform switching within the interlocking limits, operator must designate work limits and clock time limit that must not be exceeded and must immediately actuate signal levers to display proceed indication in interlocking signals governing such movements and place red tags on signal levers controlling such movements. The tags must not be removed or attempt made to change position of power operated switches within such limits until yardmaster or member of crew has orally reported switching completed and clear of work limits.

Employe requesting work limits and clock time limit must state his name, occupation, location and train or engine number. Work and clock time limits granted must be repeated to operator and if correct, response "OK" will be given by operator.

RULE 292-B. When flashing white light is displayed on dwarf interlocking signals located at Adeline Street overpass Magnolia Interlocking controlling eastward movements from work lead, 50 lead, 70 lead crossover and 70 lead; yard engines are authorized to pass dwarf interlocking signal displaying stop indication after stopping and may continue reverse or forward movements past these signals until flashing white light is extinguished.

Operator will not extinguish white light until he has been informed by Yardmaster that yard crew has been notified to clear interlocking limits.

Fruitvale: Limits on main track extend from Signal Bridge 123 to Signal Bridge 126 at Fruitvale Avenue.

Melrose: Limits extend between interlocking signals on old electric line and on the drill track between interlocking signal on west side of San Leandro Blvd. and interlocking signal on east side of WPRR crossing and is under the control of WPRR train dispatcher.

When signals do not display proceed indication after approach circuit is occupied, a member of crew must contact WPRR train dispatcher by telephone for instructions and permission to operate push button time release.

When necessary to perform switching within the interlocking limits, a member of crew must obtain clock time limit from WPRR train dispatcher and be governed by signal indication. When Klaxon horn is sounded, SP movements must immediately clear interlocking limits.

Cars or engines must not be left on approach circuits located in advance of interlocking signals.

Telephones, push buttons and instructions for operation of push button time release and dual control switches located in boxes on interlocking signal governing eastward movements on old electric line, on side of Instrument House and on instrument case adjacent to crossing of drill track and WPRR track.

Elmhurst: Interlocking limits extend either side of Junction switches between eastward SA signals on eastward and westward tracks and westward SA signal on Stonehurst Line, westward SA signals on Niles and Santa Clara Lines. The Junction switch of Niles Line and Santa Clara Line MP 13.47, is power operated, dual control switch controlled by Operator at Fruitvale.

When necessary to hand throw dual control switch or when extensive switching is to be performed over the power switch permission must be secured from Operator at Fruitvale.

Interlocking portion of SA signals controlled by Operator at Fruitvale Tower.

Trains and engines desiring to make an eastward movement from the Westward Track over the crossover, will receive permission from the Operator to hand operate the spring switch. Member of crew, after throwing the switch, will notify Operator the switch is over and points in position before Operator will clear the Signal (4R) for such movements.

When movement is completed switch must be returned to normal position.

Niles Tower: Limits extend from dwarf interlocking signal on Niles line and interlocking signal on Tracy line, 1685 feet west of WPRR crossing to Signal 298 on Milpitas line and to Signal 425 on Centerville line.

Eastward interlocking signal 650 feet west of WPRR crossing governs movements as follows:

Top unit governs movements to Milpitas line.

Lower unit governs movements to Centerville line.

When Signal 420 or Signal 422 display stop indication, train or engine must stop and not proceed until signal displays proceed indication or permission obtained from Operator.

Junction switches are dual control switches and are under control of Operator. When necessary to hand throw these switches, permission must be obtained from Operator. Instructions for operation of dual control switch machines are posted in telephone booths.

Derail near east end of yard Track No. 1 at Niles is electrically locked and under control of Operator at Niles Tower. Instructions for operation by hand when authorized by Operator are posted inside of lock box.

Whistle signals:
To San Jose, o — —,
To Centerville, — o —,
To Niles, o — o,
To Tracy, — o — o.

Newark: Limits extend from signal 50 feet east of wye switch on Centerville line to signal 1150 feet east of wye switch on Santa Clara line, and to signal 650 feet west of wye switch on Elmhurst line, and to dwarf signals on Redwood Jct. line near Newark station building.

West Zone: Main track limits extend from eastward SA signal at MP 30.06 to westward dwarf signal at MP 30.43.

South Zone: Main track limits extend from eastward dwarf SA signal at MP 36.99 to westward dwarf SA signal at MP 37.01.

Interlocking limits on Oakland Wye extend from eastward SA signal at MP 30.36 in West Zone to eastward SA signal at MP 36.99 in South Zone.

Crossover from Santa Clara main track to Santa Clara siding is equipped with dual control switch machines under control of Operator.

Newark: Switch at west end of Newark Yard, MP 31.01, Elmhurst-Santa Clara Line, is power operated under control of Operator. Westward interlocking signal governing movement over this switch is a one unit signal and will display indications per Rule 281, Fig. G, Rule 285, Fig. G, and Rule S90, Fig. 1.

San Francisco Bay drawbridge, MP 32.53 on Redwood Jct. line:

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.64 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by yardman from control panel located at the base of the Yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control machine. When necessary to hand throw this switch, permission must be secured from the Yardmaster.

Interlocking portion of the SA signal will be controlled by Tracy Operator.

The Operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 680. AUTOMATIC INTERLOCKING

East Oakland, WPRR Crossing yard tracks, MP 7.70: Limits extend between interlocking signals in approach to both sides of crossing.

Derails within interlocking limits equipped with electric locks and after locks have been released derails may be operated by hand throwing lever on switch stand located at crossing.

Fruitvale Ave. Bridge MP 9.8. Interlocking limits extend between interlocking signals in approach to both ends of the bridge.

WPRR Crossing (Stonehurst Branch), MP 13.80: Limits extend between interlocking signals in approach to both sides of crossing.

Radum, WPRR crossing MP 67.8 (San Ramon Branch): Limits extend between eastward SA signals just west of WPRR crossing and westward interlocking signals just east of WPRR crossing on both legs of wye track.

Signal clearing circuit located 100 feet in advance of eastward interlocking signal on east leg of wye and when occupied will clear signal for trains completing movement over crossing after signal has changed to stop indication account expiration of four minute time interval.

After signal clearing circuit is occupied if signal does not display proceed indication, a member of crew must actuate time release. (Wait four minutes in inclement weather or other conditions before actuating time release.) After time release is actuated signal does not display proceed indication in six minutes, but red indicator on signal mast is illuminated movement may be made through interlocking. If red indicator light is not illuminated and signal displays stop indication, movement must be made under provisions of Rule 663(c).

Signals governing movement from San Ramon Branch to main track will not display proceed indication until junction switch on main track is lined for movement.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
W	79	Oakland (5th Avenue)	Westward trains stop short of Signal 79 and wait until indicator is extinguished.
W	273	Redwood Jct.	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.
W	7 ft. mast MP 44.20	Santa Clara	Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.

GENERAL REGULATIONS

RULE 825. Livermore: Portable rail skid has been chained to tie on old engine track, when spotting cars on this track rail skid must be placed on rail and leading wheel of first car in descending direction run onto rail skid and hand brakes set if brakes are operative before engine is detached. Train crews picking up cars from this location must remove rail skid and return to proper location.

Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release hand brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 830. Milpitas: Westward trains not exceeding 75 cars making pick-up or set-out at Milpitas will stop their train with rear end west of Curtis Way, DA 41.1, crossing.

Westward trains exceeding 75 cars making set-out or meeting eastward trains will stop their train east of Capitol Avenue and wait until eastward train is into clear before proceeding.

Eastward trains having set-out or pick-up at Milpitas will leave their train west of the Battery Box located 400 feet west of the State Highway crossing at MP 40.0 while making set-out or pick-up.

Eastward trains must not exceed 75 cars after set-out or pick-up is made when meeting an opposing train exceeding 75 cars.

Newark: Between the hours of 7:00 AM and 7:00 PM, eastbound trains arriving Newark on the Dumbarton Line must remain West of Willow Street (Chemical Crossing), if making pickup or setout.

Mulford: Westbound trains picking up or setting out on Storage Tracks 1, 2 and Old Siding, must leave their train east of 137th Avenue while performing work, unless train, plus pick-up, will fit between Davis Street and Williams Street, far enough to avoid crossing gates remaining in down position.

Eastward trains making setouts on Cleaning Yard Tracks, Mulford, will leave their train 200 feet west of Davis Street.

AIR BRAKE RULES

RULE 17. Retaining valves must be used on freight and mixed trains on descending grades as follows:

Altamont to MP 52, Altamont to MP 63.

Without dynamic brake in operation:
One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

	Permissible Tons Per Unit Without Retaining Valves*				
	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking	1000	1475	1250	1850	2475
With dynamic brake in operation and WITH pressure maintaining system of braking	1600	2400	2000	3000	4000

If permission tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

*If any unit having basic dynamic brake is operated with units having extending range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF625, EF630, EF636, GF425 (except units 6700-6727), GF628, GF630, EF850B and GF850 are equipped with extended range dynamic brake.

RULE 22. Warm Springs: Trainmen must not couple air hoses on pick-ups at Warm Springs until it is ascertained that all cars to be picked up are in the track, and trainmen on Warm Springs Switcher crew must not perform switching on, or couple other cars onto the pick-ups without instructions from officer in charge who will see to it that members of pick-up crew are notified in advance.

MISCELLANEOUS

1. Look out for impaired clearance and bad footing from MP 39 to MP 39.80, Alviso, account levee constructed to hold back high tides.

Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
All	Henderson	Bay Road Salvage spur beyond a point 400 feet from switch.
All	Alvarado	Holly Sugar beyond east switch of interchange track from high line 150 feet west of beet unloading pit.

2. Load limit (car and contents):

*Redwood Jct.-Tracy	263,000 pounds
*Oakland-San Jose via Niles	263,000 pounds
*Elmhurst-Santa Clara	263,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

Unless authorized by Superintendent heavier loads must not be handled.

4.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description	
6.0	Magnolia Tower	Adeline Street overpass	Overhead
28.9	Henderson	Highway underpass	Side
32.5	Dumbarton	San Francisco Bay drawbridge	Side
34.5	Dumbarton	Newark Slough drawbridge	Side
42.9	Niles Jct.	Highway underpass	Side
30.8	Dresser	Alameda Creek bridge	Side
31.5	Farwell	Alameda Creek bridge	Side
38.3	Pleasanton	WPRR overhead bridge	Overhead
55.4	Altamont	Highway overhead bridge	Overhead and side
57.9	Altamont	Tunnel	Side
18.2	San Lorenzo	San Lorenzo Creek bridge	Overhead and side
24.2	Decoto	WPRR overhead bridge	Overhead
29.4	Niles	Highway underpass	Side
36.2	Drawbridge	Warm Springs Slough bridge	Side
29.4	Niles Tower	Street underpass	Side
36.3	Warm Springs	General Motors Buildings Tracks 2, 5, 6 and 7	Overhead

5. All movements must stop and trainmen detrain before entering General Motors Buildings. Trainmen must not ride on top of cars while switching movements are being made into and out of the above noted buildings.

6. **Tracy:** All freight trains entering Tracy Yard from Martinez and Altamont Lines slow to 8 MPH passing Tracy Yard Office so as to allow visual verification of consist.

7. **San Jose:** All freight trains entering San Jose Yard Milpitas Line slow to 8 MPH passing San Jose Yard Office so as to allow visual verification of consist.

8. Multi-level unloader on spot 150 feet east of Pacific, Guano Warehouse west end of house track Milpitas. Must not be moved.

9. Dragging and/or derailed equipment detector and indicator installed at the following locations:

MP	Location
30	Henderson
34	Dumbarton

Indicator mounted on post adjacent to detector will display revolving red light when detector is actuated. Crew members must keep vigilant look out when passing this location and if revolving red light is observed, train will be stopped promptly and inspection made of train and track notifying dispatcher of condition found.

Refer to Rule 827, All Subdivisions.

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
EASTWARD, REDWOOD JUNCTION TO TRACY:		
26.23 to 26.25 (jct. switch)	20	20
26.25 to 28.35	35	35
28.35 to 28.41 (end double track)	25	25
28.41 to 31.51	60	60
31.51 to 32.20	30	30
32.20 to 32.80	20	20
32.80 to 33.00	30	30
33.00 to 37.00	60	60
37.00 to 37.51 (Newark)	15	15
37.51 to 42.23	30	30
42.23 to 43.00 (29.60) (Niles Jct.)	15	15
29.60 to 37.10	25	25
37.10 to 40.57	35	35
40.57 to 41.43 (Pleasanton)	25	25
41.43 to 46.66	45	45
46.66 to 47.48 (Livermore)	30	30
47.48 to 52.00	50	50
52.00 to 63.00	25	25
63.00 to 70.66	50	50
70.66 to 71.16 (jct. Los Banos)	35	35
NILES TO SAN JOSE YARD:		
29.00 to 29.81	15	15
29.81 to 43.55	60	60
43.55 to 47.39	15	15
WEST OAKLAND TO SANTA CLARA:		
4.40 to 5.00	15	15
5.00 to 5.93	30	30
5.93 to 5.94 (WP crossing)	20	20
5.94 to 6.20	30	30
6.20 to 7.20 (Market St. to Oak St.)	15	15
7.20 to 10.50	30	30
10.50 to 13.43	40	40
13.43 to 13.50 (jct. switch and crossover)	15	15
13.50 to 13.70	30	30
13.70 to 28.79	60	60
28.79 to 31.00 (Newark)	35	35
31.00 to 39.00	60	60
39.00 to 40.10	25	25
40.10 to 43.73	60	60
43.73 to 44.48	40	35
44.48 to 44.59	15	15

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
WESTWARD, TRACY TO REDWOOD JUNCTION:		
71.16 to 70.66 (jct. Los Banos line)	35	35
70.66 to 63.00	50	50
63.00 to 52 00	25	25
52.00 to 47.48	50	50
47.48 to 46.66 (Livermore)	30	30
46.66 to 41.43	45	45
41.43 to 40.57 (Pleasanton)	25	25
40.57 to 37.10	35	35
37.10 to 29.60 (43.00) (Niles jct.)	25	25
43.00 to 42.23	15	15
42.23 to 37.51	30	30
37.51 to 37.00	15	15
37.00 to 33.00	60	60
33.00 to 32.80	30	30
32.80 to 32.20	20	20
32.20 to 31.51	30	30
31.51 to 28.41	60	60
28.41 to 26.25	35	35
26.25 to 26.23 (jct. switch)	20	20
SAN JOSE YARD TO NILES:		
47.39 to 43.55	15	15
43.55 to 29.81	60	60
29.81 to 29.00	15	15
SANTA CLARA TO WEST OAKLAND:		
44.59 to 44.48	15	15
44.48 to 43.73	40	35
43.73 to 40.10	60	60
40.10 to 39.00	25	25
39.00 to 31.00	60	60
31.00 to 28.79	35	35
28.79 to 13.70	60	60
13.70 to 13.50	30	30
13.50 to 13.43 (jct. switch)	15	15
13.43 to 10.50	40	40
10.50 to 7.20	30	30
7.20 to 6.20 (Oak St. to Market St.)	15	15
6.20 to 5.94	30	30
5.94 to 5.93 (WP crossing)	20	20
5.93 to 5.00	30	30
5.00 to 4.40	15	15

Trains must not exceed 20 MPH when passing trains being serviced between Cedar and Kirkham Sts., Oakland.

Light engines may make Column 1 speed.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditons, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake	Number of Cars	Tons Per Operative Brake
70	70	110	62
75	69	115	61
80	68	120	60
85	67	125	58
90	66	130	56
95	65	135	54
100	64	140	52
105	63	145	50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS........................See Page 28

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
EASTWARD, AGAINST CURRENT OF TRAFFIC:		
West Oakland to Elmhurst, except: (subject to lesser speeds on westward track)	40	40
5.65 to 6.05	20	20
9.55 to 10.13	20	20
ELMHURST TO NILES JUNCTION:		
13.43 to 13.50 (jct. switch)	15	15
13.50 to 29.00	50	50
29.00 to 29.60	25	25

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED
MP MP Column:	1	2
WESTWARD, AGAINST CURRENT OF TRAFFIC:		
Elmhurst to West Oakland (subject to lesser speeds on eastward track), except:	40	40
10.13 to 9.53	20	20
6.05 to 5.65	20	20
NILES JUNCTION TO ELMHURST:		
29.60 to 29.00	25	25
29.00 to 13.50	50	50
Thru Jct. Switch MP 13.43	15	15

Light engines may make Column 1 speed.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	70
75	69
80	68
85	67
90	66
95	65
100	64
105	63
110	62
115	61
120	60
125	58
130	56
135	54
140	52
145	50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through turnouts on other than sidings	10
On branches	10
Ravenswood, on spur	10

RULE 5. Time at stations between Oakland (16th Street) and Sacramento applies at station sign, except time for eastward first class trains at Davis via Gerber line applies at east switch north siding.

RULE 14(l). Whistle must be sounded on westward trains immediately on emerging from Tunnel No. 1 at Oleum.

RULE 26. West Oakland (Passenger Yard): Electric switch locks on west switches Tracks 2 to 5, inclusive, Track 19 and on east switches Tracks 14 to 18, inclusive.

Power operated derails on west end Track 6 and on east end Tracks 2 to 6, inclusive, and Track 13.

RULE 30. Between the hours of 9:00 PM and 6:00 AM engine bell must not be rung, except in emergency, in city limits of Napa.

RULE 82-A. Trains terminating at Bays will register at West Oakland.

Trains originating Desert Unit, West Oakland, will obtain train orders and clearance at West Oakland.

Trains to Western Division at Sacramento originating at Antelope must obtain two clearances, one endorsed Sacramento Division, the other endorsed Western Division. Train orders addressed to such trains at Antelope will apply the same as if addressed to them at Sacramento and may leave Sacramento without clearance.

No. 378 and extra trains, except trains of passenger equipment, from Western Division passing Sacramento will not obtain clearance at Sacramento.

Winters Branch: Trains operating on Winters Branch will move only by train order authority.

Calistoga Branch: Trains operating on Calistoga Branch between MP 71.5 and end of Branch MP 95.7 will move only by train order authority.

Sacramento Northern trains originating at Sacramento 19th & B Streets, or Sacramento-Yolo Port District connection to Western Division will obtain clearance at Sacramento.

RULE 83. Identification of westward first-class trains between Bahia and Suisun-Fairfield may be made by eastward trains enroute Schellville Branch to be applied at Suisun-Fairfield for crossover movements. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst, outside of D-251 limits between Sacramento and West Oakland and end of double track Martinez on Tracy line provided superior trains moving in the same direction are not passed in interlocking limits or territory where Rule D-251 is applicable.

RULE 83-A. At the following stations only trains indicated will register:

West Oakland	Trains originating or terminating
Suisun-Fairfield	
Davis	
Avon	
Port Chicago	
Pittsburg	

Napa: Extra trains operating beyond Napa, MP 69.5, originating or terminating.

Sacramento: Trains originating or terminating, except No. 378 and extra trains passing Sacramento to or from Western Division.

Extra trains will register at Lombard.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Suisun-Fairfield	All trains from Sacramento line to Schellville Branch. All trains from Schellville Branch to Sacramento line.
Davis	All trains to or from West Valley Subdivision, Sacramento Division. All Sacramento Northern Trains.
Lombard	All trains from Schellville to Suisun-Fairfield. All trains from Suisun-Fairfield to Schellville.
Tracy	No. 51 and No. 52.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
	Oakland (Martinez line)	17.35
	" (Niles line)	15.82
	" (Alvarado line)	14.01
22.50	Pinole	24.80
27.97	Port Costa	39.24
	" (Benicia spur)	End of track
	" (Tracy line)	37.08
47.05	Suisun-Fairfield	52.45
	" (Schellville Branch)	51.25
66.00	Dixon	68.10
74.20	Davis	77.37
	" (Tehama line)	77.39
37.50	Avon-Port Chicago	42.93
	(San Ramon Branch)	40.50
46.31	Pittsburg	52.20
61.00	Brentwood	62.70
78.50	Tracy (Martinez-Los Banos line)	85.64
66.50	" (Niles-Lathrop line)	74.37
59.85	Napa Jct. (Creston-Schellville line)	64.56
	" (Calistoga line)	71.50
	" (Vallejo line)	End of track
71.72	Schellville (Lombard-Ignacio line)	NWP 38.93
	" (Sonoma line)	NWP 41.70
58.00	Elmira	61.00

Tracy: Trains moving on main track in either direction will move between junction switch, MP 70.62, and west switch of train yard by block signals whose indications will supersede the superiority of trains.

RULE D-97-A. Will apply as follows: Between Oakland (16th Street) and Sacramento; Martinez and Mococo.

RULE 98. Railroad crossings at grade not interlocked.

Oakland: Santa Fe crossing of the Southern Pacific Co. track at Lowell Street and Stanford Avenue, engines must stop before crossing Santa Fe track and not proceed over crossing until it has been ascertained that there are no trains or engines closely approaching the crossing from either direction.

Santa Fe trains and engines have precedence over Southern Pacific Co. engines when using this crossing.

Stop signs installed on Southern Pacific Co., track approach to this crossing. Sign reading railroad crossing, 1,000 feet, is located on the left hand side in the direction of approach to this crossing for eastward engines.

Trains and engines must approach with caution, and may move over the following crossing without stopping, if crossing clear and no movement approaching on intersecting line:

Napa Jct.: Big balloon track crossing of Calistoga-Vallejo main track. Schellville line trains using big balloon track need not stop.

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Napa Jct.: Calistoga-Vallejo main track crossing of big balloon track. Calistoga-Vallejo line trains must stop.

RULE 103-A. Automatic Crossing Gates: On double track automatic crossing gates do not operate for against current of traffic movements at territory speeds and Rule 103-A will apply.

Berkeley: Westward passenger trains making station stop must stop with rear of train clear of Virginia Street.

Richmond: Westward passenger trains making station stop must stop with rear of train clear of Barrett Avenue.

Martinez: Crossing Gate Key Control installed at Ferry Street to actuate gates when backup movements made to clear junction switch.

Suisun-Fairfield: Eastward passenger trains stopping at station will stop clear of crossing circuit 80 feet west of Union Avenue designated by sign reading "Spot" on instrument case.

Sound Detector microphone is located at instument case. When ready to proceed, enginemen will sound whistle to activate the crossing gates and proceed slowly to permit gates to be down before train enters the crossing.

Port Chicago: Gates are not actuated when trains are stopping at station to receive or discharge traffic until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down.

Lombard: Westward trains and engines stopping at Lombard Station will stop clear of impulse circuit 200 feet east of State Highway 29 designated by sign reading "SPOT". When train starts, proceed slowly to permit vehicular traffic to clear crossing.

Napa: When switching on or across any street crossing city ordinance requires that member of crew must protect crossing.

Public Utilities Commssion orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

Suisun-Fairfield	Crossing Union Ave. when moving against current of traffic, A-49-0,
Thomann	Crossing highway on Napa Valley Cooperative Winery spur, AB-86.0-C,
Vacaville	Crossing on Standard Oil spur, AD-63.15-C,
Davis	Crossing County road on University spur, A-75.7-C,
Port Chicago	Crossing County road on leads to Naval Supply Base, B-40.8-C, B-41.0-C,
Pittsburg	Crossings on industry spurs, B-47.8-C, B-48.1-C,
Brentwood	Crossing highway on Irrigated Farms spur, B-62.6-C.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Avon	San Ramon line, for siding.
Suisun-Fairfield	Napa Jct. line for west leg of wye to Oakland.
Napa Jct.	Suisun-Fairfield line, for Schellville line, at MP 61.60.
Schellville	Schellville Branch, for NWPRR main track.

Napa Jct.: Track known as big balloon is Schellville line main track.

RULE 105. Suisun-Fairfield: Westward siding is first track north of westward main track extending from MP 48.65 to MP 48.10.

Westward trains entering siding, if length of train permits, must stop with rear of train clear of Union Avenue crossing.

North siding is first track north of main track on Schellville Branch extending from MP 48.94 to MP 49.95, to be used by trains from Schellville Branch to Sacramento line. May be used by other trains only when instructed by dispatcher.

Davis: Eastward siding is first track south of eastward main track extending from MP 75.88 to MP 76.60

Westward siding is first track north of westward main track extending from MP 77.03 to MP 75.73.

North siding is first track west of main track on Gerber line extending from MP 75.79 to MP 76.75.

RULE 107. Station train indicators are provided in approach to following stations:

Eastward	Westward
Berkeley (2)	Richmond
Crockett	
Martinez	
Suisun-Fairfield	

When illuminated these indicators will convey the following information:

TRAIN—Train at platform on opposite track.

CLEAR—Indicator in service.

When neither TRAIN or CLEAR is illuminated, indicator is out of service and report must be made to chief train dispatcher as soon as practicable.

RULE 221. West Oakland, Rodeo and Avon are train-order offices only for trains originating.

RULE D-251. Will apply as follows: On westward track between Sacramento and Oakland (16th Street). On eastward track between Oakland (16th Street) and Sacramento.

RULE 291-A. Flashing yellow lamp unit installed on the mast of the eastward interlocking signal on the Coach Yard lead track and is displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Interlocking signals are listed as "P-I" or "P-SA".

Eastward Signal	Protection	Westward Signal
P-I	Collision detector, highway underpass west end of wye, Davis	P-I
	Spring switch, end double track, Mococo.	P-359
P-510	Collision detector, highway underpass, MP 50.97 (Los Medanos)	P-519
P-710	Spring switch, junction to Los Banos line, Tracy	
	Spring switch to yard, Tracy	P-829
P-SA	Dragging equipment detector, MP 34.8	
	Dragging equipment detector, MP 35.9	P-347

A 2-indication, light type indicator installed just below interlocking signal P-SA located 550 feet west of draw span, and a 2-indication, light type indicator attached to the mast of signal P-347, are designated as dragging equipment indicators.

They will display red aspect with signal at "STOP" when actuated by dragging equipment detector, and lunar white aspect when not actuated by dragging equipment detector.

Crews of trains stopped by signals P-SA or P-347 with the red indicator light illuminated, will inspect their train for dragging equipment.

Signal may be cleared and indicator light changed to lunar white by pressing push button located on signals P-SA and P-347 after first complying with Rule 306.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Giant: Crossover between main tracks at west end of trackage for Bethlehem Steel plant MP 20 equipped with electric locks.

Cannon: Electric locks installed on crossover switches and on switch for Sacramento Northern connection to the eastward track.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600 ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

RULE 512. Block indicators adjacent to east switch of crossover and switch to Sacramento Northern connection, Cannon apply to the eastward main track only.

RULE 513. Westward trains before making crossover movement at Cannon, permission must be received from operator, Davis.

Sacramento Northern trains on eastward trip before entering Main Track at Cannon, permission must be received from operator, Davis.

RULE 516. Overlap posts.

Los Medanos (250 feet west of Signal 509) .... Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Mococo	End double track	Westward track
Tracy	Junction switch MP 71.16 to Los Banos line	Lathrop Subdivision

Spring switches not equipped with facing point locks are located as follows:

*West Oakland	1st and 16th St. line	16th St. line
*Stege	Seaver wye	East leg of wye
*Ozol	East end siding	Main track
*Ozol	West end siding	Main track
Martinez	Junction switch	Bridge line
*Suisun-Fairfield	East end north siding	Main track
*Lombard	East end siding	Main track
*Lombard	West end siding	Main track
Tracy	MP 82.98 Los Banos main to yard	Yard Track

*Equipped with switch-point indicator.

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic operator must know that track to be used is clear of opposing engines and trains.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operated on yard tracks.

Oakland, 16th St.: Limits extend from signals 427 feet east of MP 5 on the Martinez line to signals at MP 6.55.

Hand throw crossover from Desert lead to No. 1 Freight Lead has been installed at MP 5.9, Desert Yard.

Crews making movement from Desert lead to No. 1 freight Lead will secure authority from 16th Street Towerman to pass signal located near west switch of the crossover into 16th Street interlocking.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yard leads 40, 50 and 60.

A flashing yellow lamp unit, Rule 291-A, installed on the mast of the eastward interlocking signal on the Coach Yard lead track will and be displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

Martinez: Limits extend on eastward main track from home signal 600 feet east of station building to westward dwarf signals 938 feet east of station building on Tracy line and on Suisun Bay bridge line.

Limits extend on westward main track from signals 2350 feet east of station building on Tracy line and on Suisun Bay bridge line, to interlocking signal 50 feet west of junction switch. Operator's permission must be obtained before fouling westward main track at crossover and switches from spurs to westward main track between Martinez and Ozol.

Suisun Bay Bridge, Martinez: Bridge zone limits extend on both tracks from home signals 800 feet east of draw span to home signals 550 feet west of draw span.

Davis: Limits extend on eastward and westward main tracks from interlocking signals at MP 75.25 to interlocking signal on signal bridge at MP 75.98 on westward main, interlocking signals 325 feet west of MP 75.98 on eastward main and east pass, interlocking signal at MP 75.97 on the west pass and to westward interlocking signal at MP 75.55 on the Gerber line.

The switch to the University spur is hand throw. Member of crew will operate hand throw switch after receiving permission of operator. Dwarf signal at clear point is an interlocking signal.

Cranks for hand operating power switches are mounted on signal instrument case on south side of track at west end of street underpass on the west end, on instrument case on south side of track opposite P.G.&E. switch on the Sacramento end, and on instrument case between 3rd Street and 4th Street on the Woodland end.

When necessary to hand operate power switches, permission must be obtained from the operator.

Instructions for hand operating power switches are mounted on cases above crank holders.

Sacramento River Drawbridge: Eastward trains stopped by interlocking signal at MP 87.94 must contact Sacramento Yardmaster and if authorized to enter yard, must then contact operator, Sacramento River Drawbridge, and be governed by Rules 662 and 663.

Brazos Drawbridge over Napa River: Movement over bridge not permitted unless operator on duty.

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.62 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by yardman from control panel located at the base of the Yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control machine. When necessary to hand throw this switch, permission must be secured from the Yardmaster.

Interlocking portion of the SA signal controlled by Tracy Operator.

The operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 680. AUTOMATIC INTERLOCKING

SNRy Crossing, MP 86.90: Limits extend between interlocking signals in approach to both sides of crossing.

Westward signal D-877 located 500 feet west of MP 88 governs westward movements on eastward main track.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows
W	77	Oakland (16th St.)	Stop east of 67th St. Emeryville and wait until Signal 77 displays proceed indication.

RULE 705. HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
W	672	Dixon	
H	702	Tremont	MP 71.6 Tremont

Scanner Site

MP	Direction	Location
68.5	East and West	Dixon-Sucro

Refer to Rule 705 All Subdivisions.

RULE 715. Automatic Train Stop eastward track from Martinez to westward dwarf signal 300 feet east of draw span.

When Signal 328 displays yellow aspect, trains must not exceed 15 MPH from this signal to track magnet located 550 feet west of semi-automatic signal, opposite white concrete marker block.

Automatic Train Stop westward track from 100 feet east of Signal 357 to Martinez.

When Signal 347 displays yellow aspect, trains must not exceed 15 MPH from this signal to track magnet located 1250 feet east of semi-automatic signal, opposite white mark on bridge.

GENERAL REGULATIONS

RULE 825. Elmira: Not less than three hand brakes must be set on east end of cars left standing except with less than three hand brakes all brakes must be set.

Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Trains crews must not release brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 830. Schellville: Trains arriving and departing and when switching movements are being made over Highway Crossing No. 12, Schellville crossing will be cleared after each move is made to allow vehicular traffic to pass.

RULE 858. Between Oakland (16th Street) and San Francisco passengers and hand baggage will be transported by bus; checked baggage, mail and express by truck.

AIR BRAKE RULES

RULE 17. Retaining valves must be used on freight and mixed trains on descending grades as follows:

MP 58 to Napa Jct., MP 58 to Cordelia.

Without dynamic brake in operation:

One retaining valve for each 80 tons on train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

Permissible Tons Per Unit Without Retaining Valves*

	Basic-Dynamic Brake		Extended Range Dynamic Brake		
	4 Axle	6 Axle	4 Axle	6 Axle	8 Axle
With dynamic brake in operation but WITHOUT pressure maintaining system of braking:					
MP 58 to Napa Jct.	750	1125	950	1400	1875
MP 58 to Cordelia	525	800	650	975	1300
With dynamic brake in operation and WITH pressure maintaining system of braking:					
MP 58 to Napa Jct.	1600	2400	2000	3000	4000
MP 58 to Cordelia	1300	1950	1600	2400	3200

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

*If any unit having basic dynamic brake is operated with units having extending range dynamic brake, all units in consist must use tonnage authorized for units having basic dynamic brake.

Locomotive classes AF628, AF630, EF425, EF625, EF630, EF636, GF425 (except units 6700-6727) GF628, GF630, EF850B and GF850 are equipped with extended range dynamic brake.

RULE 33. Descending grades where restrictions apply under Rule 33, All Subdivisions, are designated below:

EASTWARD Martinez to Bahia Eastbound Track			WESTWARD Creston to Cordelia		
MP	MP	Speed	MP	MP	Speed
33.8	to 36.0	20 MPH	58.0	to 55.0	25 MPH

RULE 38-A. Will not apply at Sacramento except incoming engineer after completing stop will made a full service brake application, leaving brakes applied. Running test in compliance with Rule 39 must be made as soon as speed permits after train departs terminal.

RULE 39. Running test must be made as follows:

Eastward and westward trains at Creston.

MISCELLANEOUS

1. Westward passenger trains except No. 101 making station stop at Martinez, will stop with units clear of Ferry Street Crossing, and if train is of sufficient length after head end work completed, second stop will be made to detrain passengers.

Eastward passenger trains making station stop at Martinez, except No. 12, will make normal station stop blocking Ferry Street, but not to exceed ten minutes.

2. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
All	Rocktram—Three spur tracks diverging from interchange tracks on river side of main track.

3. Load limit (car and contents):

*Oakland-Sacramento	263,000 pounds
****Martinez-Tracy	263,000 pounds
Suisun-Fairfield-Schellville	240,000 pounds
Napa Jct.-Krug	240,000 pounds
**Krug-Calistoga	169,000 pounds
Napa Jct.-Vallejo	240,000 pounds
Elmira-Winters	240,000 pounds
**Winters-Esparto	210,000 pounds
***Avon-San Ramon	210,000 pounds
San Ramon-Radum	240,000 pounds

*A gross weight of 315,000 pounds is allowable for uniformly loaded four axle cars with minimum axle spacing of 6 feet 0 inches and minimum distance of 37 feet 0 inches center to center of trucks, also wheels 38 inches or more in diameter.

**Exception: Passenger equipment on six axles weighing not over 200,000 pounds may be handled.

***When notified that false bents are not in place on bridge 56.99 load limit between Avon and Radum will be 169,000 pounds.

****Cars SP 463000 through 463499, maximum gross load per car is 260,000 pounds when operated in series.

Unless authorized by Superintendent, heavier loads must not be handled.

4. LOCATION OF STOCK YARDS

Station	Capacity in cars
Suisun-Fairfield	10 (Water)
Cannon	10 (Water)
Dixon	28 (Water)
Flosden	3
Schellville	5 (Water)

5.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description	
6.4	Emeryville	Key system underpass	Side
6.6	Emeryville	W. U. pole line, near Park Ave.	Side
14.5	Richmond	AT&SFRy overhead bridge	Overhead
16.0	San Pablo	AT&SFRy overhead bridge.	Overhead & side
34.7	Martinez	Alhambra slough bridge	Side
88.5	Washington	Sacramento River drawbridge	Side
63.6	Vacaville	Ulatis Creek bridge	Side
75.8	Winters	Putah Creek bridge	Side
52.5	Thomasson	Suisun Creek bridge	Side
53.0	Thomasson	Tunnel	Overhead
93.5	Maple	Napa River bridge	Side
37.9	Avon	Pachecho slough bridge	Side
43.1	Nichols	Wagon bridge	Overhead & side
43.2	Nichols	AT&SFRy overhead bridge.	Overhead & side
48.8	Pittsburg	Signal bridge	Overhead
64.7	Brazos	Drawbridge over Napa River	Side
44.6	Hookston	Walnut Creek bridge	Overhead & side
49.2	Walnut Creek	San Ramon Creek bridge	Overhead & side
57.0	San Ramon	San Ramon Creek bridge	Overhead & side

6.

Dragging and/or derailed equipment detector and indicator installed at the following location:

MP	Location
78.7E	Swingle

Indicator mounted on post adjacent to detector will display revolving red light when detector is actuated. Crew members must keep vigilant lookout when passing this location and if revolving red light is observed train will be stopped promptly and inspection made of train and track, notifying dispatcher of condition found.

Refer to Rule 827, All Subdivisions.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2
EASTWARD, WEST OAKLAND TO SACRAMENTO:		
4.9 to 4.25	15	15
4.25 to 4.81 (crossing)	20	20
4.81 to 7.75	45	45
7.75 to 16.31	60	60
16.31 to 21.50	70	60
21.50 to 34.40	45	45
34.40 to 34.70 (Martinez)	30	30
34.70 to 35.50	45	45
35.50 to 48.38	70	60
48.38 to 49.00	55	55
49.00 to 75.20	70	60
75.20 to 76.00, except:	45	45
75.25 to 75.60 (crossover and west leg wye to Gerber line)	20	20
76.00 to 87.79	70	60
87.79 to 88.54 (Spring Switch)	35	35
87.79 to 88.54 (SNRy. crossing)	45	45
88.54 to 89.00	10	10
EASTWARD, AGAINST CURRENT OF TRAFFIC:		
West Oakland to Sacramento	59	49
(Subject to lesser speeds on westward track), except:		
31.10 to 31.11 (Ozol)	35	35
34.20 to 34.21 (Ozol)	35	35
75.20 to 76.00	20	20
EASTWARD, MARTINEZ TO TRACY:		
34.70 to 35.88	35	35
35.88 to 35.91	25	25
35.91 to 48.15	70	60
48.15 to 48.90	50	50
48.90 to 48.95 (Pittsburg)	25	25
48.95 to 53.30	70	60
53.30 to 53.60 (Antioch)	45	45
53.60 to 80.70	70	60
80.70 to 81.83	45	45
81.83 to 82.24 (jct. Niles line)	20	20
82.24 to 82.58 (jct. Los Banos line)	35	35

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2
WESTWARD, SACRAMENTO TO WEST OAKLAND:		
89.00 to 88.54	10	10
88.54 to 76.00	70	60
76.00 to 75.20, except:	45	45
75.60 to 75.36 (West leg wye and jct. switch)	20	20
75.20 to 49.00	70	60
49.00 to 48.38	55	55
48.38 to 35.50	70	60
35.50 to 34.70	45	45
34.70 to 34.40 (Martinez)	30	30
34.40 to 21.50	45	45
21.50 to 16.31	70	60
16.31 to 7.75	60	60
7.75 to 4.81	45	45
4.81 to 4.25 (crossing)	20	20
4.25 to 4.9	15	15
WESTWARD, AGAINST CURRENT OF TRAFFIC:		
Sacramento to West Oakland	59	49
(Subject to lesser speeds on eastward track), except:		
34.21 to 34.20 (Ozol)	35	35
31.11 to 31.10 (Ozol)	35	35
76.00 to 75.20	20	20
WESTWARD, TRACY TO MARTINEZ:		
82.58 to 82.24 (jct. Los Banos line)	35	35
82.24 to 81.83 (jct. Niles line)	20	20
81.83 to 80.70	45	45
80.70 to 53.60	70	60
53.60 to 53.30 (Antioch)	45	45
53.30 to 49.70	70	60
49.70 to 48.95	50	50
48.95 to 48.90 (Pittsburg)	25	25
48.90 to 35.91	70	60
35.91 to 34.70	30	30

Light engines may make Column 1 speed not exceeding 70 MPH.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH between Martinez and Tracy) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	70
75	69
80	68
85	67
90	66
95	65
100	64
105	63
110	62
115	61
120	60
125	58
130	56
135	54
140	52
145	50

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of sginals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY	FREIGHT AND MIXED
MP MP Column:	1
EASTWARD, AVON TO RADUM:	
38.10 to 44.64	25
44.64 to 44.67 (bridge)	15
44.67 to 49.22	25
49.22 to 49.25 (bridge)	15
49.25 to 56.99	25
56.99 to 57.02 (bridge)	15
57.02 to 67.80	25
EASTWARD, ELMIRA TO ESPARTO:	
59.60 to 76.00	25
76.00 to 90.35	10
EASTWARD, SUISUN-FAIRFIELD TO SCHELLVILLE:	
48.93 to 49.30	15
49.30 to 61.47	35
61.47 to 61.77 (Napa Jct.)	15
61.77 to 64.15	35
64.15 to 65.25 (drawbridge)	15
65.25 to 72.60	35
72.60 to NWPRR. (on wye)	10
EASTWARD, NAPA JUNCTION TO VALLEJO:	
61.60 to 61.75	15
61.75 to 66.65	25
66.65 to 69.00	15
EASTWARD, NAPA JUNCTION TO CALISTOGA:	
61.25 to 61.30	15
61.30 to 66.10, except:	35
Thru turnout at MP 65.86	15
66.10 to 66.80	5
66.80 to 69.20	35
69.20 to 71.10 (Napa)	25
71.10 to 71.60	35
71.60 to 71.78 (highway crossing)	15
71.78 to 79.50	35
79.50 to 87.00	25
87.00 to 87.70 (St. Helena)	20
87.70 to 95.78	25

TERRITORY	FREIGHT AND MIXED
MP MP Column:	1
WESTWARD, RADUM TO AVON:	
67.80 to 57.02	25
57.02 to 56.99 (bridge)	15
56.99 to 49.25	25
49.25 to 49.22	15
49.22 to 44.67	25
44.67 to 44.64 (bridge)	15
44.64 to 38.10	25
WESTWARD, ESPARTO TO ELMIRA:	
90.35 to 76.00	10
76.00 to 59.60	25
WESTWARD, SCHELLVILLE TO SUISUN-FAIRFIELD:	
NWPRR. on wye to 72.60	10
72.60 to 65.25	35
65.25 to 64.15 (drawbridge)	15
64.15 to 61.77	35
61.77 to 61.47	15
61.47 to 49.30	35
49.30 to 48.93	15
WESTWARD, VALLEJO TO NAPA JUNCTION:	
69.00 to 66.65	15
66.65 to 61.75	25
61.75 to 61.60	15
WESTWARD, CALISTOGA TO NAPA JUNCTION:	
95.78 to 87.70	25
87.70 to 87.00 (St. Helena)	20
87.00 to 79.50	25
79.50 to 71.78	35
71.78 to 71.60 (highway crossing)	15
71.60 to 71.10	35
71.10 to 69.20 (Napa)	25
69.20 to 66.80	35
66.80 to 66.10	5
66.10 to 61.30, except:	35
Thru turnout at MP 65.86	15
61.30 to 61.25	15

On Calistoga Branch between locations shown below, maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in SPEED RESTRICTIONS FOR TRAINS TABLE above:

MP 78.56 to MP 92.30

EF415A, EF415B, EP415A, EP415B, EF418, EF423, AS418	10 MPH
ES410, BS412, ES412	15 MPH
BS616, BS616B, FP624	15 MPH
AS409, AS410, BS410	20 MPH
AF624	20 MPH

MP 92.30 to MP 95.78

AS409, AS410, BS410	10 MPH

On Winters Branch between MP 76.34 to 90.08 maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in SPEED RESTRICTIONS FOR TRAINS TABLE above:

ES406	10 MPH
KF636A	10 MPH

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through turnouts on other than sidings	10
On branches	10

RULE 10-I

Oral authorization and acknowledgments between Foremen and Engineers for trains to pass "Red Conditional Stop" signs must be worded in the following forms:

SP FOREMAN . . . . AT MP . . . . CALLING SP (Train No.) . . . .

(After train answers giving his identification): (i. e.) SP Train . . . .

Foreman's Response

"THIS IS SP FOREMAN . . . IN CHARGE OF THE WORK BETWEEN MP . . . . AND MP . . . . SP TRAIN ORDER NO. . . . . WE ARE IN THE CLEAR AND YOU MAY PROCEED PAST THE RED CONDITIONAL SIGN AND THROUGH THE LIMITS OF ORDER AT . . . . MPH, REPEAT . . . . MPH"*

Engineer's Response

"THIS IS ENGINEER SP TRAIN . . . . I MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER NO. . . . . BETWEEN MP . . . . AND MP . . . . AT (Speed). REPEAT (Speed) MILES PER HOUR."

Foreman must acknowledge Engineer's response as follows:

SP TRAIN ORDER NO. . . . ., BETWEEN MP . . . . AND MP . . . . MPH* OK."

*When no speed restriction account above Form "Y" Train Order, tell train engineer "At Maximum Authorized Speed."